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An Address
ON
THE DISORDER OF MEDICAL CHARITY.

Delivered before the Stratford Division of the British Medical Association on Nov. 3rd, 1910,

BY LAURISTON E. SHAW, M.D. LOND., F.R.C.P. LOND.,
PHYSICIAN TO, AND LECTURER ON MEDICINE AT, GUY'S HOSPITAL.

GENTLEMEN,—I am obliged to the Stratford Division of the British Medical Association for giving me this opportunity of meeting some of its members, and hope that those who are present this evening will extend to my efforts to interest them in a branch of medical sociology a fair measure of that splendid commodity the disorder of which in its application to medicine forms the subject of my remarks.

Perhaps I ought at once to say that I do not propose to deal at any length with what one may call internal medical charity—the charity which one member of the profession may extend to his individual colleagues or to his brethren as a whole. As far as individual internal medical charity—a charity of spirit rather than action—is concerned, there is evidence that its growth is almost entirely proportionate to the opportunities which are afforded by such local meetings as this you are holding to-night for medical men to get to know each other intimately. There is nothing so effective as personal intercourse for promoting brotherly feelings amongst professional colleagues.

May I also say a few words on the question of collective internal medical charity? It appears to me that all who are jealous of the good name and fair reputation of our profession should spare no effort to secure that adequate arrangements are made for us to deal ourselves with those cases in which sickness or early death throws members of our profession or their dependents upon the indulgence of the community. Our profession should in this respect be self-supporting. Through some organisation it should be possible to make mutual provision for all such personal calamities. I lay stress on the mutual character of such provision. Whilst contributions should be collected from all members of the profession proportionate to their means, it should be recognised that the benefits of such a provident system should be restricted to those who had previous to their calamity shown the joint virtues of prudence, regard for others, and respect for professional interests by themselves subscribing to such a fund. Some such scheme of mutual medical benevolence seems almost a necessity if we are to hold up our heads as men of common prudence and common sense amongst the members of sister professions.

And now let us turn to external medical charity and divide it as before into individual and collective. It is to collective external charity that the title of my address is especially applicable, but before turning to its consideration I should like to refer to some aspects of individual external charity worthy of our consideration. To every one of us there will naturally be known a certain number of people whose circumstances will from various causes become straitened, and if such people will in the ordinary course turn to us for medical help we shall provide it, and any other charitable assistance that our compassion may suggest, on such terms and in such full measure as our means will allow. Such personal help in money or in kind is a matter entirely for our individual consciences, and we shall be guided by our knowledge of the circumstances and the character of the recipients, and shall do just as much harm or good as any other individual dispenser of charity who restricts his charitable instincts to cases within his own personal knowledge. But however private may be our practice, we can none of us be allowed to restrict our individual charity to this comparatively safe field, however extensive it may be. In addition there will be brought to our notice, often by people quite unknown to us, a large number of cases, also quite unknown to us, which we are asked to treat as private patients for nothing or at greatly reduced fees. Every general practitioner is familiar with the note, often on the choicest paper, which raises in his heart hopes of a new patient able to afford to pay a decent fee and which, beginning "Dear Dr. ——, knowing your kindness of heart," ends by putting upon his visiting list a "Kingdom comer" who will remain upon it till "relieved by art or released by death." Such vicarious philanthropists often sin rather more from ignorance than from real meanness, and they are too frequently encouraged by the complacency with which medical men respond to their requests. The means to do ill deeds makes ill deeds done, for, as I hope to show in a moment, ill-considered and promiscuous medical charity is an ill deed. Often it would be found that this patient taken on without fee at the philanthropist's request is paying a reduced fee to a brother practitioner with whose kindly attention the patient is entirely satisfied. A medical practitioner once told me it was his habit when asked by a third person to see a patient without fee to forward a contribution requesting that it might be used to secure for the patient paid medical advice which he was confident would prove more satisfactory than his own unpaid efforts. This course, though doubtless economical in the end, would be difficult for many of us to pursue, but all must recognise that steps should be taken to check vicarious private medical charity of this description by awakening the public conscience in the matter. Heaven knows that many poor people thus privately introduced to us are sadly in need of medical and other help, but this promiscuous private charity, like promiscuous public charity, is one of the most fruitful causes of the failure of suitable provident schemes whereby such poor people could secure without the pain of charity adequate provision in time of need.

Recently there came to my notice an incident which raised in me a hope that the evils of promiscuous individual charity might some day be brought home even to members of the medical profession. I chanced upon a personal explanation in the daily press from a bishop of a northern diocese of the Church of England. It appears that he had been snapshotted in the act of handing something to a beggar in the street and the photograph had been reproduced in a newspaper under some such title as "A Bishop giving Alms." Whereupon the bishop thought it necessary to explain that his action had been misinterpreted. He was not giving promiscuous alms, which might rightly be regarded as a social crime, but was merely handing to a beggar the address of some institution where his case could be investigated. I have sometimes thought the savage instinct for promiscuous charity which is so firmly implanted in us as a profession was an indication of our joint origin with the primeval priest. If our sister profession of the Church should set us an example in this matter there is hope that even we may in time see the errors of our ways.

But I must come to the main subject I am dealing with this evening—collective external medical charity, which is of greater moment because its greater volume causes greater harm, and because its reform requires our concerted action. To such an audience as this, medical men working in one of the densest areas of our industrial population, I need bring no evidence as to the excessive volume and uncoördinated character of medical charity. Nor will it ever again be necessary for conferences or commissions to collect evidence on this matter. Read where you like in the ponderous volumes of the Poor-law Commission's Report, wherever medical matters are dealt with, in special investigators' memoranda, in appendices of evidence, or in the "Majority" or "Minority" conclusions, you will find the most convincing indications that medical charity is excessive, without order, ineffective, obstructive. It is mere waste of time to pile up facts to make this indictment more damning; examination of the facts already established is only worth while in so far as it helps us to find remedies. If to-night I ask you to consider certain features which may explain why present conditions are so unsatisfactory, it will only be because such explanation needs to be appreciated before the defects can be dealt with.

Now at the outset I should like to say that the mere excess of the volume of medical charity is a splendid tribute to the quality of heart of all those who are responsible for it. Sympathy with pain and suffering of the individual and with the prospective grief of the friends and relatives in danger of seeing their beloved ones die is a quality none could see lessened one iota without fear for the future of our race. It is this sympathy which prompts us all, and will always

prompt us all whenever we are brought in contact with a sick person needing help, to throw to the winds all the most cherished convictions of the political economist and the charity organiser, and then and there to provide whatever is necessary without regard to ourselves, our colleagues, the patient's independence of character, or the destruction of the principles of thrift in the community at large. It is just because we recognise the impossibility of allowing our hearts to be controlled by our heads when face to face with cases of individual physical suffering that we should give the closest consideration in our cooler moments to the ultimate results of our actions. In any attempt that may be made to render the administration of medical charity more orderly the limitations of a civilised community in this direction must be reckoned with. We may, however, hope gradually to educate the impulsive philanthropist to take a wider view: encouraging him to neglect for the moment even an individual sufferer, we must lead him on to consider possibilities of prevention rather than cure of disease, and show him how his open hand and generous heart discourage arrangements which but for them would undoubtedly be made for dealing with sickness in those earlier stages when it is easily curable without entailing economic disaster.

But the imperative call of physical suffering and impending death does not appear to be by any means the sole cause of the excessive supply of medical charity. While there is no form of charity which makes so insistent an appeal to the charitable, and none which, from its immediate apparent results, seems so eminently satisfactory, there is none which in the carrying out is so cheap. I do not mean that the total cost of medical charity to the philanthropic subscribers is small, but that the quantity that can be bought for a given sum is very great compared with other charities. Think what one can buy for a thousand pounds by endowing a bed in a surgical ward of one of the great voluntary hospitals. In every year for evermore one could look forward to providing for 17 patients the usual average three weeks' residence in the ward, each occupant securing a first-class operation at the hands of a surgeon whose average fee for such operations would probably be 50 guineas, together with the same surgeon's visits two or three times a week, the visits twice a day of a qualified house surgeon, the help whenever needed of radiographers, actino-therapeutists, or other specialists, any form of laboratory investigation that may be required, and the constant attention of sisters, nurses, and dressers. Altogether for a sum, say of £30 a year, one can provide services which if they were provided at the normal rate for paying-patients in a private nursing home might easily amount to considerably more than the £1000 by the single payment of which the endowment is secured. No one can blame the philanthropist for laying out his money to such advantage. On such terms the wonder is that the actual growth of the volume of medical charity is not even more rapid than it is. If for the single payment of £100 one could secure each year for evermore 100 pounds' worth of the commodity provided by the Children's Country Holidays Fund, or by the London Playing Fields Association, one would feel disposed to invest every penny of one's savings at such splendid interest. The question is not why is such cheap charity so largely bought, but why is it so cheap to buy? Why can every philanthropist who thinks of building a hospital or founding a dispensary be confident that he can secure unlimited medical service free of cost?

If one were to accept as correct the remarks usually made by eminent laymen on ceremonial occasions connected with the laying of foundation-stones or the opening of new wings of hospitals, and allowed to pass without contradiction by members of the medical staff present, one must believe that medical men give their services to medical charities in the lavish manner I have described because they possess in even greater measure than other members of the community a spirit of self-sacrifice and devotion to the cause of suffering humanity. But even the orator must sometimes doubt the truth of his explanation, while I am confident that the members of the staff present on such occasions must often find it difficult to accept these implied compliments with composure. Some more satisfactory explanation must be found. It has lately been clearly set out for me by a correspondent criticising some remarks I made on the subject of medical charity in a recent Presidential address. My critic is a former pupil, whose distinguished career in medicine and in public affairs I am watching with great interest. He is not attached to the staff of any public medical charity, nor is he engaged in private practice. He writes to me: "In one point I venture to question in their entirety your conclusions as to the injustice of medical charities being run at the expense of the medical man who works them, in contrast to other charities run by parsons and schoolmasters. Parsons and schoolmasters have definite salaried jobs and are not engaged in private practice. They have, therefore, nothing to gain from the experience, advertisement, and honour of philanthropic charity." I am not at the moment defending myself from my friend's criticism, but I am making use of his admirably concise explanation of the motives which lead medical men to give their services so freely to charitable institutions. It is, as he clearly implies, because of the return they receive in the way of "experience, advertisement, and honour."

Must we not, as a body of medical men honestly endeavouring to understand the economics of medical charity with a view to its improvement in the public interest, admit the accuracy of my friend's description of the situation? Can anyone doubt that a chief cause of the cheapness of medical charity to the philanthropist is that it affords to the small section of the profession specially engaged in its administration experience, advertisement, and honour? It is for the public and the profession as a whole to consider how far the creation in this way of a small privileged class of the profession is really for the general advantage. Experience is a commodity which the public as a whole may well demand should be diffused throughout the general body of the medical profession mainly responsible for their treatment. Anything like a ring or corner in medical experience cannot be for the common good. The present system tends too much to make the experience gained by the staffs of public charities the prerogative of the very wealthy, who alone can pay high fees, and of the very poor, who alone can be regarded as proper recipients of charity. In the public interest arrangements should certainly be made for the privileged class freely to share their experience with their less favoured brethren by securing constant coöperation between the staffs of hospitals and the practitioners engaged in private practice amongst the neighbouring population.

How far the public gains by the advertisement of those engaged in charitable practice is in the main an economic question. I believe it is generally recognised in the commercial world that unless advertisement causes bankruptcy it is ultimately and in the long run paid for by the consumer. The peculiarity of advertisement by charitable medical practice is that the obvious and first cost is borne not by the advertiser but by his less prosperous colleagues, to whose possible patients he gives free service. Such patients could not in any case be the advertiser's paying patients and the amount of his advertisement is not, therefore, limited by any direct personal pecuniary consideration. Large as is the amount vicariously paid by the general practitioner for the consultant's advertisement, it is probable that in the long run the public as a whole pays the profession as a whole for the advertisement. Glaring financial injustices to individuals are incidentally caused by the system. Patients too honourable or too simple to seek charitable assistance at the hospital are often seriously crippled financially by the high fees which surgeons find themselves obliged to charge because of the large amount of free treatment given to others often far better able to pay. Even if the privileged member of the profession is amply repaid indirectly for his services, the general public and the main body of the profession are justified in looking askance at an arrangement which is largely responsible for the flood of medical charity, and has many other points of disadvantage for the community as a whole. Enough has been said, I think, as to the etiology of that part of the disorder of medical charity which consists in its excessive volume.

The next disorder of public medical charity which must claim our attention is the want of coördination between different medical charities and between medical charities and other agencies for providing medical assistance. This want of coördination is partly due to a want of proper definition of the aim of medical charity and partly to the natural individualism of all charity which makes it so resistant to schemes of organisation. The latter cause could doubtless be overcome if a successful attempt were made to define the real intention of the purveyors of medical charity. It should

be made clear whether medical charity is in competition with, or supplementary to, the Poor-law; whether it is desired to encourage or make unnecessary provident schemes whereby poorer patients can secure by insurance the benefits of ordinary medical attendance; and lastly, whether it is intended to provide ordinary medical attendance under all circumstances or only special services in the case of unusual or complicated injuries and diseases. Until these points are settled for medical charity as a whole, and for each individual institution which dispenses it, no proper coördination can be secured. Nor until this is done is it possible to deal with the third great defect of medical charity—namely, its failure to restrict its benefits to the proper recipients. All forms of inquiry as to the economic or medical fitness of those seeking medical charity are peculiarly difficult. One naturally revolts at adding any unnecessary physical or mental trouble to a patient in pain or discomfort. Unless it is quite clear what will be the upshot of our inquiries they seem particularly heartless. As a result of these considerations efforts at selection by means of inquiries are practically abortive, and none can doubt that by whatever criterion one measures the fitness for medical charity, the most glaring anomalies can everywhere be found.

The charges which are brought against medical charity by all who have investigated its problems are, first, that there is too much of it; second, that its operations lack proper coördination; and third, that the selection of its beneficiaries is unsatisfactory. I have endeavoured to lay before you some of the chief causes which lead to these disorders, and in the short time that still remains to us I would ask you to consider possible remedies. There are not wanting people of influence who are so distressed with the defects of medical charity and the apparent hopelessness of dealing with them, that they advocate a policy of ending rather than mending. Set up, they say, at the public cost means for doing in an orderly and efficient manner all that which charity now does, and collective medical charity will gradually disappear. They have precedent for this belief in the result upon charity schools of the establishment of a State system of elementary education. In estimating the likelihood of these people being able to gain their wishes we must not lose sight of the fact that the balance of political power is gradually passing from the hands of the classes who have hitherto governed medical charity into the hands of the masses who have received its benefits. Nor must we forget that our new masters are quite conscious of the truth of the motto of one of our great endowed charities, "It is more blessed to give than to receive." Is it not possible for us as a profession to put before the public a considered scheme for the control and direction of medical charity in such a manner that it shall not interfere with other schemes of medical help, and yet shall command the sympathy of large-hearted philanthropists anxious to promote the people's health and happiness?

There seem to be two outstanding features which must be met in any arrangement which can be expected to secure general acceptance. First, it must not interfere with any State scheme for dealing with the immediate treatment of the very poor nor with any provident schemes whereby the moderately poor may be enabled to insure by small payments for the cost of ordinary medical attendance. Secondly, it must recognise the splendid results which have in the past arisen from the partnership of medical charity, medical education, and medical research, and must foster a continuance of this association. Now, there is a custom honoured by long usage in the medical profession, and likely to be considerably extended as the complexity of medical practice and the development of specialism increase, whereby when cases under treatment by one practitioner develop conditions causing difficulty in diagnosis or treatment, or anxiety as to the ultimate outlook, a brother practitioner specially versed in the particular class of case, or more experienced in practice generally, is called in to confer or assist in any way mutually agreeable to the medical men concerned and their joint patient. Here, surely, is a rôle for medical charity. Let it provide the help corresponding to the second or consulting practitioner, refusing in any case to deal at first hand with patients, but freely offering assistance to those who in the usual way of private practice, by some provident system, or through the State, have secured the services of a medical attendant to deal with ordinary ailments and are found by him to require and to be unable to pay for further assistance. Here is a definite aim which would at once eliminate the greater part of overlapping and would enable charity satisfactorily to coördinate its activity with all other agencies for medical relief. Provident schemes would be given full opportunity for their development, while those interested in reforming the Poor-law would feel assured that their efforts would not be handicapped by competition with charity.

But how far would our second essential feature be fulfilled? Would medical charities conducted on these lines have due opportunity for continuing their good work in medical education and medical research? With one possible and unimportant exception I believe that some such arrangement as this would improve vastly the opportunities in both these directions in such of our medical charities as are also medical schools, and would raise to a higher level of excellence medical and surgical treatment in all charitable institutions. Incidentally it would provide for each member of the medical staff "experience" which he would always share with a brother general practitioner, "advertisement" far more valuable to himself and much less costly to his unprivileged professional colleagues, and "honour" unalloyed by any feeling that he was dealing shabbily with his less fortunate brethren. The cases sent to the charity would all be selected on account of some special interest or difficulty, and the appalling flood of trivialities which break the heart of the out-patient staff at all important hospitals would be relegated to general practitioners who could deal with them efficiently and at leisure and receive proper remuneration for the work.

The one point in which it seems possible this arrangement might fail fully to meet the requirements of medical education is as follows. The number of trivial ailments treated in the charities would, as has been said, be definitely diminished, and opportunities of practical instruction in the method of dealing with such simple cases might consequently be lessened. Personally I do not think much stress is laid upon this class of instruction in the medical schools at present. In any case it is clear that its loss could easily be compensated for by requiring each student to spend some time in attending the practice of a provident dispensary or similar institution. This would be a small matter for reorganisation compared with the far-reaching reforms effected by the proposed change. Can there be any fear that such an arrangement would alienate the sympathy of subscribers and check the voluntary support of hospitals? It should, indeed, have an opposite effect. The charitable public likes to see its money well spent. It is seriously and rightly disturbed by the reports of overcrowding, overlapping, and want of coördination in hospital methods as shown by its tendency to entrust its donations to central funds rather than to individual institutions. The principle of the out-patient department providing the sick poor with additional help in difficult cases has already been recognised as a reasonable basis for a special appeal for funds, and in the last annual report of one of our largest hospitals the prospective subscriber is informed that "the out-patients' section of the hospital in increasing degree fulfils its true function of 'the poor man's consultant.'"

If the profession should recognise in the development of medical charity in this direction a possible solution of many of its own difficulties and a hopeful way of maintaining the usefulness of our great voluntary medical institutions, of which as a nation we are justly proud, by what means is it possible to bring about the reform? The first essential step is the education of the governors of the charitable institutions. If they once appreciate that the value of the work of their institutions would be enhanced by this method they would not fail to adopt it, provided they could be assured that they ran no risk of losing subscriptions by so doing. I believe I have shown that any such fear is not warranted. But institutions are ever nervous of taking a new step unless they are assured that their competitors will follow them. Here we should receive great assistance from the central collecting funds such as King Edward's Fund and the Hospital Sunday and Saturday Funds. The announcement by these bodies that for a charity to conduct its work on these lines would be regarded as a virtue to be rewarded by extra grant would give moral and pecuniary courage to the individual hospitals. But the great force which I feel confident will in the end direct medical charity into this defined but effective field of activity is the public spirit of the medical men responsible for the work. It

is impossible to believe that men who possess the extraordinary advantages conferred on them by hospital appointments will tolerate much longer the continuance of a system which brings them "experience, advertisement, and honour" at such a heavy cost to their less fortunate colleagues, and hopelessly blocks the way to numerous urgently needed reforms in the medical treatment of the sick poor

An Address

ENTITLED

"MEDICAL STUDENTS AND MEDICAL PRACTITIONERS."

Delivered before the Aberdeen Students' Medical Society on Dec. 9th, 1910,

BY G. H. COLT, M.B., B.C. CAMB., F.R.C.S. ENG.,

ASSISTANT SURGEON, ROYAL INFIRMARY, ABERDEEN; AND ASSISTANT TO THE PROFESSOR OF SURGERY, UNIVERSITY OF ABERDEEN.

MR. PRESIDENT AND GENTLEMEN,—First let me thank you very much indeed for the honour you have done me by asking me to address you to-night. I very much appreciate the task, and although I may fail to do it justice the subject of the address is one of great interest to every medical man at the present time.

For our purpose this evening it is unnecessary to distinguish students from practitioners. The student becomes a qualified practitioner, and every practitioner is, or should be, a student to the end of his days. It is true that after qualification the outlook is different both as regards study and as regards responsibility, but just as there are things which are best learnt while you are unqualified, so there are matters which you will only acquire after you have begun practice. Let me urge you as students and as practitioners never to miss the opportunity of taking this responsibility. Nothing will teach you so much and nothing else will help you so well to learn and appreciate the difficulties of others. Responsibility is a great incentive to progress. It safeguards you from degenerating into mere money-making machines; it prevents you from taking advantage of others who are ignorant of medical things; it urges you to reassure and comfort the needy and suffering; and it brings you that sense of satisfaction and peace which is the one great reward that is your due.

VALUE OF PRACTICAL WORK.

In order to qualify yourselves for this responsibility it is absolutely necessary that you should have educated yourselves properly and should have acquired an accurate, scientific, and logical way of thinking. Moreover, you must be, above everything else, practical, and you will find that when you are confronted with any problem, especially with any sudden emergency, you will at once recall what you have already seen and observed for yourselves. You will as a rule be unable to call to mind what others have said or what this or that book says should be done. Of course, there are a certain number of broad lines of treatment, more particularly in surgery, that are easily learnt and remembered and that change slowly, but, speaking generally, the things that will be useful to you are the things which, as students and house surgeons, you have had the opportunities of seeing and watching. Let me urge you to take careful note of the patient's case and of his name and address, so that you may write to him or to his medical attendant from time to time, and so follow out the course of his disease. Many students leave hospital with an entirely erroneous idea of the natural history and course of disease, especially of malignant disease, because the inoperable and recurrent cases are stowed away in the workhouse. By employing the means I have mentioned you will at once learn a great deal that you would otherwise have missed. More especially will the need for early diagnosis and treatment in the case of malignant disease become apparent.

It is also essential that you should have been on the spot and should have observed for yourselves most, if not all, of the common emergencies of general surgery. Merely to come into a ward in the morning for half an hour and to learn that a patient was operated on during the night for a perforated gastric ulcer is valueless. You could have learnt that in the smoking-room. You should have been on the spot at the time that the patient was admitted, whether during the night or in the daytime, and you should have taken the history of the case accurately and gone thoroughly into the various physical signs which led up to the performance of the operation. The latter is such a very small part of the whole that if you have not actually seen and followed such cases for yourselves you will one day open the abdomen where the patient is suffering from alcoholic gastritis or from lead colic or you will operate for intestinal obstruction on a patient who has been taking diachylon in order to procure abortion. Still worse than this, you will delay operation in certain cases until it is far too late for you to relieve the patient at all. In passing, you should have asked yourselves this question, Could I have dealt with this case in an efficient manner without any assistance? At the present time there is hardly an emergency in general surgery, with the single exception of the surgery of the skull and brain, that you cannot deal with single handed if you lay your plans properly. Naturally, this is not a proceeding that one adopts for choice, but as a matter of necessity it is quite possible at the present day to carry through with success a large abdominal operation single-handed and often with comparative ease. Spinal analgesia when it is a success, is usually an unqualified success, and if by observation and practice you have learnt the fallacies and mistakes that contribute to mar the result you will succeed in the great majority of such cases. Local analgesia has also at the present time been brought to a state which is very near perfection. Automatic retractors can be bought or they can be improvised by means of weights, and, on the whole, if you have thought the matter out and are ready when the call comes you will not meet with any serious difficulty.

Consider the changes that occur in methods of treatment as may be exemplified by the study of appendicitis. Many a life is now saved by an early operation where formerly the patient would probably have died or would, at any rate, have had a long and tedious illness. Many such patients used to die with the symptoms of intestinal obstruction, from abdominal distension, general peritonitis, jaundice, portal pyæmia, subphrenic abscess, and pericarditis, the cause of the later symptoms being often extremely difficult and obscure by reason of the initial onset of the disease having been entirely missed. Study well, then, the natural course of disease, apart from medical and surgical interference, and study also the results of medical and surgical treatment, and compare all these things one with another.

At the present time the great question in surgery is this: "How can I best avoid the operation in my patient's interest, and is this course the right one to pursue?" The popular idea of surgery is one of the knife; diagnosis is entirely left out of account. The public forget that before an operation becomes necessary the question has to be decided as to whether there is any disease amenable to surgical interference present or not, and whether this disease is in the patient's head or his heels. The vomiting and constipation associated with cerebral tumour, or the symptoms of intraperitoneal injury associated with concussion of the brain are common instances, and there are many others. Thus diagnosis will be your first aim. No book will teach it to you but only practical work, and a great deal of that, and very conscientiously carried out. It should be automatic with you to doubt every statement that you hear or read, then you should go and look and see for yourselves and find out whether it is true, or false, or only partially true. Your state of mind should resemble that of the schoolboy who wrote in his examination paper: "We are taught that the natives of these parts used to dwell in caves, but no caves have been discovered and no natives." So many statements are copied from book to book without authority being quoted that theories become stated as facts. In the course of your verification of these matters you will come across many things that are not known, and it is your duty to the profession to stop and if possible investigate and record the issue for the benefit of others. Such opportunities are seldom repeated, and however small the new item may appear to be it should be published because there are always persons on the look out for these things or for confirmatory evidence of older knowledge, and these men will collect your information and place it with that obtained from other sources.

Even if the facts or theories that you publish are wrong they serve the useful purpose of making others think. Such a course sometimes proves to be expensive, but the benefit to the profession is great, and so is the benefit to those who have become sufficiently interested in the matter to stop and investigate it. For instance, at the present time there is great need of a book on the subject of the natural history and course of disease as observed over long periods in general practice. What is required could be written by a practitioner of long experience, but not by one of the younger members of the profession. It is, however, one of the greatest misfortunes that happen to us that hardly anyone sits down towards the end of his life to write out his experiences, facts, and conclusions for the benefit of others. Just at the very time when he is capable of putting these things in a proper light, when his wisdom is far greater than that of any book, at the time of his death this vast store of experimental knowledge perishes with him. There are so many things in medicine that are too long to be settled in a lifetime—it seems to need two or more lifetimes—that until some persons make this an object to be attained we shall be ignorant of much that deeply concerns us. Again and again you see the younger men begin the study of and the accumulation of facts concerning some more special branch of medicine; this leads to greater and greater experience and knowledge, far ahead of that possessed by the average man; the thing becomes a burden to its possessor; and when he retires he either does not care to put it on paper, or he is too much occupied with other things. Sometimes he does not consider it is worth while, and even if he did he would very likely find that it would take many years to touch on more than a few points in the whole. It should, however, be your endeavour, not merely to practise your profession, but to advance it a step or two further.

THE MEDICAL CURRICULUM.

This leads me to mention the obvious fact that all your teaching is very largely specialised. No one at the present time can possibly know all that there is to be known in the subjects of medical science, or about all diseases. Everyone lets some of it go and gives more time to other parts. In this way specialists arise, and the true specialist is the man who, having had a long and varied practical experience of general medicine and surgery, finds that he has been led to see and observe more in a certain limited area of it than in the rest. He is possibly attracted by this or that class of case and he takes to that kind of work more than to any other, and, as a rule, does it better.

Unfortunately, or perhaps fortunately, it is not possible for you to declare at the outset as students what branch you will ultimately take up. Were this possible you would perhaps save a great deal of time in obtaining your qualification, but you would not really gain much, and as matters stand at present you cannot adopt such a course, and it is doubtful if it will ever be possible for you to do so. Nevertheless, certain parts of our knowledge are far more advanced than others, and this results in much disproportion between the various subjects in the medical curriculum. For instance, a general practitioner could probably learn all the anatomy he is ever likely to require in a fortnight if he were properly taught. On the other hand, an aural surgeon can never hope to learn very much in the course of a whole lifetime about the physiology of the ear. All these matters are at sixes and sevens. It is said that the system you are put through teaches you to observe and to think, but it does not seem to occur to anyone that you can be taught to observe just as well, if not better, by employing material for the purpose that will ultimately be of use to you. You are not going to operate on crayfish, neither are you going to be professors of zoology. The question for the teacher should be, "How can I best ensure that at the end of his course the student shall have acquired a practical knowledge of his profession and shall still have some brains left to go on with?" It seems to me that if a student is correctly guided his brain should be at least twice as good at the end of his course as it was at the beginning, whereas sometimes it is undoubtedly twice as bad. It should be able to assimilate what it requires and store it away neatly pigeon-holed for future reference, but instead of that the brain that is left is often literally riddled with holes or sinuses, each one left by an examination. The one that extends between the two ears is a particularly large one. They discharge various facts and débris for a time and eventually become contracted, unimpressionable scars, incapable of further receiving facts or theories, much less of reasoning. The mill, in fact, receives you on an endless band, passes you along, shears off close all the tentacles and feelers and prolongations of your mind, sifts out and throws off as a useless by-product all the original thoughts and speculations that occur to everyone, and turns you out in tabloid form, duly labelled, with a string of letters dragging behind like the tail of a comet, of which the average layman does not know the meaning. But the comet is an abnormal one; the head of it is not as bright as the tail. The system, in fact, forces you to conform to a set standard at peril of being burnt at the stake, and if it does not succeed it labels you "chronic." It prevents you from doing your own work in your own way at the very time when your brain is most receptive. You enter the mill at the age of 8; if you are very lucky indeed you may leave it at 22. For 14 years you have to pass at least three examinations a year, the preparation for which effectually prevents you from educating yourselves in literature, languages, history and arts. During that time you transfer the brains of other people in a scrappy and imperfect manner to notebooks, which once you have used you will take good care never to open again. The substance of the lecture has passed through your head on to paper; it has not remained where it was designed to remain and where you paid for it to be placed; neither has it made you think. If the system were correct it might have done so, but it is incorrect. The chief function of a lecturer is to point out the relative importance of the various parts of a subject, and his power of doing so is much impaired if he has to give lessons in dictation. The system has outgrown itself in all directions; it is incongruous, it no longer teaches you to reason, but merely to pass examinations and to write badly. Incidentally it fills your brains with a smattering of rubbish that is too little to be of use for research and too voluminous to leave room for anything useful. If you come to define the system—not necessarily the medical system only—of so-called modern education you arrive at this statement: "A system that takes money from those who can seldom afford to part with it and gives it to those who sometimes do not deserve it." It should be the duty of everyone in this room to try to improve the present system of general education and of medical education in particular. It is a national duty, and one that we owe to those who come after us. Do not merely get quit of the system and say, "Anyhow, it does not affect me any more and so I will not make any suggestion." This is a sin of omission. To begin and live by it without trying to improve it is worse and is a sin of commission. Many others have to follow, and unless the way is properly paved the nation as a whole will degenerate. Remember the case of the aniline dye industry. The system turns out some good enough men, but a different system would probably turn out many better ones. When you get into the wards you are too old by some three years at least, and you are heartily tired of the whole thing. You do not stay long enough at the clinical part of your work, though you stay as long as you can; and where does your preliminary medical education come in? Is it not true that it proves to be almost entirely useless?

SUGGESTED REMEDIES.

It is true that many of your teachers are teachers by accident and not by design. These men will, as a rule, demonstrate to you things that are of use, and such as they have proved for themselves. They do it at great cost of time and patience, and if it were not that they themselves learn by doing it and are kept up to a high standard by it very likely the system would break down. It is probable that a remedy lies in a combination of the old apprenticeship system with the examination system, the student being apprenticed to his hospital and not to an individual, with two-thirds of the marks given for the apprenticeship and one-third for the examination; but there are objections to this arrangement, and it would be difficult to work. The subjects of preliminary medical education can be materially cut down. For instance, the whole study of biology can be reduced to the description of a single cell to which is added a *résumé* of the principles underlying the different methods of investigation of its structure and functions, and a long and complete demonstration under the microscope of very many different kinds of cells. Pharmacology, too, for your purpose can be greatly cut down, and as to materia medica, not one practitioner in a hundred remembers a tenth part of what he has to acquire for

examination purposes. For actual purposes of treatment or research he can always refer to the known and listed facts if he has been taught the correct use of his books. The manufacturing chemist has taken the place of this part of the older knowledge, and as a matter of business it is far cheaper and safer for you to employ him as part of your system than it is for you to spend your capital and brains in acquiring the minutiæ of such knowledge. After qualification you can always stop and return and verify or look up anything bearing on the subject. The subjects referred to and others that you study are so fascinating that you are apt to spend too long a time at them and to have too little time for clinical work. The weak point in the present system is that the really plodding, conscientious man who tries to learn his work and to get "signed up" as well is often unable to do so; moreover, he is not always the man who scores; the less conscientious but more superficial man sometimes does better. As showing the fallacy of assuming that passing preliminary examinations helps the study of medicine, you will often see men who have taken up the study of medicine late in life simply sail through and turn out well afterwards, and who up to then "did nothing in particular and did it very well."

TEXT-BOOKS.

As to books, the modern text-book is complete and cheap. Consider the vast store of information that has been multiplied quickly by modern printing and illustrative processes. If from such a book you only obtain one really sound idea you have had more than your money's worth; but you will obtain many. The proper use of such a book is as a guide-book. Medical classics are perhaps in a different class. To mention only a few of the more modern ones: Hilton's "Rest and Pain," Foster's "Physiology," Paget's "Lectures on Surgical Pathology," Macready's "Treatise on Ruptures," Clerk Maxwell's "Matter and Motion," Goodeve's "Elements of Mechanism." The system will effectually prevent you from having time to read them, for they do not pay. If ever a treatise did set out in well-expressed logical sequence the facts and theory of a science, that book is Foster's "Physiology," and his "Life of Claude Bernard" is similar. But instead of being given time to read them you are condemned to memorising the absorption bands of blood, tracts in the nervous system that resemble the trains in the "Continental Bradshaw," the names rather than the principles of rare surgical instruments and operations, and a mass of theory stated as fact in a most illogical sequence. Such things are crammed up regularly twice a year, although you always have access to them whenever they are wanted, but just because someone may once have asked a question bearing on them they must be memorised in case they are wanted at the examination. Avoid comparing the exquisite lithographic plates in Macready's "Ruptures" with the present-day photographic reproductions on heavy glazed paper; it is all too sad. Again, by reading the current numbers of the weekly and monthly journals as they appear, you will largely avoid the necessity for reading the more advanced and specialised text-books. You need not pay much attention to the names of the authors so long as you know the substance of the chief papers that deal with common things. But read everything critically, especially the text-book. Such a book may miss out an important point in a subject. For instance, in describing the operation of excision of the upper jaw the danger of fracturing the base of the skull is not mentioned, but I have twice seen it occur. Twice, also, have I seen gross malignant disease left behind in performing this operation in a suitable case, simply because the teacher said the malar bone was not to be removed and the operator had this obsession in his mind. If you study the septum between the maxilla and malar bones you will see what a large amount of harm has resulted from the teaching and practice of a cut-and-dried examination subject without at the same time pointing out its fallacies and limitations in practice. Therefore listen, but do not believe until you have looked for yourselves, and then not always, and certainly never in a hurry.

MEDICAL ETHICS AND OTHER MATTERS.

Now, as practitioners there are certain things that you should know about, certain things that you should have acquired, and certain others that you should do, which the tabloid gentleman has never heard of. They were left out in the scheduled list of the attainments that he should possess. In the first place, secrecy and no gossip. The fact that the patient is consulting you must on no account be known to anyone but the two of you without his consent. You must on on account give any information about any patient, rich or poor, either in hospital or in private practice, without consent. Secondly, you should have a sincere manner totally devoid of pompousness, a manner which has been described as being easy and free without being free and easy. Thirdly, you should know a good deal about the etiquette of your profession. Most of this knowledge is only an application of common sense and good manners, but still, there are certain special points that you should have inquired about, notably the proceeding at consultation. You should do as you would be done by, and never take the bread out of the mouth of another practitioner by underselling him. You should play a straight and honest game, and although I regret to say you will sometimes find that this course is not the one that pays best at the time—for we are all human—there is no doubt that it will do so in the long run. If you cannot cure your patient at least prevent him from falling into the hands of the quack, whose advertisements promise so much to all those who suffer from the things that everybody has got. As a local practitioner said the other day, "I think all medical men should have had a sporting education." Fourthly, on the day you register your qualification you should join a society for medical defence. Self-defence is the first law of nature. Alone you are powerless against the attacks of sundry people, but united you are strong and powerful, for your knowledge is very great and has been acquired laboriously and at great cost. This last fact should always be with you, and it is occasionally useful, as, for instance, when a patient comes to you demanding an explanation of certain symptoms and talking glibly of them. He has read them up in one of the popular "Child's Guide to Knowledge" series, sold by the publishers for the purpose of taking the money. He wastes your time and gives you nothing for it, a proceeding which, if carried on too long, leads to the workhouse. You say to him, "How long can you spare me to tell you this?" He says, "How long do you require." You say, "It took me five years to learn, and it will take at least that." He leaves shortly after. Then, again, you must not be nervous in your practice. You are not likely to be. That you may be very nervous in the totally abnormal mental atmosphere of an examination is nothing. Everyone is, some more so than others, but when you come to practice, if you have succeeded in screwing sufficient time out of the system as you go through it, you will be dealing with matters of which you have already had practical experience, or, at any rate, you will be able to recall a somewhat similar case and you will find that you are really not nervous. For much the same reason things will not frighten you; indeed, sometimes the difficulty will be for you to get sufficiently excited to act quickly. The earthworm and the snail move so slowly, their parts are so intricate, that if you have devoted much attention to them you may possibly still be pondering and thinking, and, indeed, you may be so polarised on them that the flash of the symptoms of angina across the patient's countenance will pass unobserved when you come to see it. Again, you should among other things be able to draw up a will or to take a deposition and see that such is duly executed. Remember, above all things, that the dead cannot speak, and when the speculative insurance agent comes to see if he can avoid his obligation to the widow and children of the dead man, be very careful what you say as to the length of time the patient had been afflicted. In a case of doubt surely the dead should have the benefit of it.

The public are ignorant of medical matters, and it is a good thing that this is the case, because otherwise many of them would become hypochondriacal. The press, however, is teaching the public too much without at the same time warning them that they can never understand medical things without a five years' practical training. A few words in plain language from the patient's point of view will always be acceptable, and if you put the matter clearly you will not have any difficulty and will not be worried when things do not run a rapidly successful course. And never say that there is no risk in an operation, however simple. There is always a risk, but fortunately it is usually a small one. Most distressing incidents occur through neglect of this simple precaution.

Your profession should be taken seriously, though the

humorous side of it will often appeal to you irresistibly. This serves to help you on your way and you will often need it. Another practitioner here remarked lately: "Three things are necessary for a successful practitioner; first, the patience of Job; secondly, the temper of an angel; and thirdly, the power to work miracles." So you see you are likely to need a little fun as well.

PROSPECTS OF SUCCESS.

Then as regards success. In general practice your manner will be the making of you. It has also been facetiously stated that you will make a large practice if you give the mother a clinical thermometer and get on the telephone. You may also succeed by being able to eat a large number of dinners without getting ill. You may even succeed by ability, but this is rare. In whatever way you manage it, do not become mere hurried, money-making machines, devoid of courtesy and observation. You owe more to your profession than that. If you want to make money go into trade; buy carpets from the natives at twopence each and sell them elsewhere at five pounds. It is fairly simple and is also very intellectual, especially if there is competition, but it is not professional, though you will be able to have a holiday whenever you like and you will seldom work more than six hours a day. As medical men you will work all day and most of the night, and will seldom get a holiday.

As practitioners, using the term in the widest sense, we have several advantages. We are at once admitted to any class of society that we like. We carry our profession with us; a certain small stock-in-trade is often necessary, but speaking generally we have only to be in attendance for the matter to be settled. We are nearly certain, if we remain well, to be able to make a living, and we undoubtedly earn the unbounded gratitude of the whole of the civilised world. It would take too long this evening to go into the question of our other privileges. They are well set out in Kipling's address. We are subject to many disadvantages. Our labour is sweated at every turn. In our junior appointments we at least expect in return for giving our labour cheap to have sufficient leisure in which to study and digest the cases that are passing through our hands; it is what we pay for; but in some parts of the country the amount of material passing through the infirmaries has so increased latterly that the junior men are run off their legs with routine work and this reward is denied them. Although the possessors of skill and knowledge, which presumably should be valuable to our employers, our time is wasted in having to enter names in books and files, such work, in fact, as we should give to our children to do at home. In practice we contract a large number of bad debts that we cannot recover without losing our patients, and we are generally the last to be paid. Throughout our lives we have none of the pleasures such as fall to an actor or a statesman. We do not experience the joy of waiting for a fine reception and the plaudits of the crowd. We cannot go on and count our laughs; indeed, they are more usually scored up against us. We are engaged in continually summing-up evidence impartially and trying to steer clear of excess of fashion or of a craze. We become impassive, so much so that sometimes we fail to appreciate the value of the evidence ourselves and become mere mechanical ciphers rather than integral parts of a train of circumstances which we ought to guide intelligently, and when the day's work is finished we may have no interest left unless we have our hobbies. Towards the end of our careers there are only a small number of pensions for us, although as a professional class we are relatively numerous.

And in conclusion, the poet observes with respect to age and health:—

> "God doth not need
> Either man's work or his own gifts; who best
> Bear his mild yoke, they serve him best: his state
> Is kingly; thousands at his bidding speed,
> And post o'er land and ocean without rest;
> They also serve who only stand and wait."

RUSSIAN SURGEON'S CENTENARY.—The centenary of the birth of the famous Russian surgeon, N. I. Pirogoff, was celebrated at the Pirogoff Museum, St. Petersburg, on Nov. 13th (26th) last in the presence of many distinguished members of the surgical and medical professions.

THE TREATMENT OF SPLENIC ANÆMIA BY SPLENECTOMY.[1]

BY G. A. SUTHERLAND, M.D. EDIN., F.R.C.P. LOND.,
PHYSICIAN TO THE HAMPSTEAD AND NORTH-WEST LONDON HOSPITAL, AND TO THE PADDINGTON GREEN CHILDREN'S HOSPITAL;
AND
F. F. BURGHARD, M.S. LOND., F.R.C.S. ENG.,
SURGEON TO KING'S COLLEGE HOSPITAL AND TO THE PADDINGTON GREEN CHILDREN'S HOSPITAL.

SPLENIC anæmia or primary splenomegaly is a disease almost always, if not invariably, fatal, whatever the medical treatment may be. The pathology is not yet clearly determined, and reliance on the diagnosis must be placed at present on certain clinical features which are fairly clearly defined. In former years the term splenic anæmia has been loosely applied to other disorders of the blood and other diseases of the spleen, as is clearly shown in many recorded cases. But if surgical treatment is to be adopted it is of the greatest importance to have the disease clearly defined, as otherwise disastrous results may follow and the operation be unjustly condemned.

Professor Osler[2] has done much in differentiating the characteristics of splenic anæmia, and Dr. H. D. Rolleston[3] has summarised them as follows: 1. Anæmia of the type usually spoken of as chlorotic—i.e., a diminution in the number of red corpuscles, with a diminished corpuscular value in the hæmoglobin. 2. Absence of any leucocytosis, usually leucopenia. 3. Considerable splenic enlargement, which cannot be correlated with any other known cause, such as leukæmia, syphilis, tuberculosis, malaria, or hepatic cirrhosis. 4. The prolonged nature of the disease. 5. The tendency to gastro-intestinal hæmorrhage from time to time. 6. The termination of the disease, if sufficiently prolonged, in hepatic cirrhosis with ascites (Banti's disease).

The last three of the above criteria may be described as accidental and non-essential. While Osler and Irving Lyon lay stress on the prolonged course of the disease, Frederick Taylor and Samuel West emphasise the fact that death usually occurs in from six months to four years. As a matter of fact, there would appear to be acute or subacute cases and chronic cases, the latter of which may last from 10 to 20 years. It may be that the juvenile type of disease tends to run a more acute course than that met with in adult life, as so often happens in the case of other affections. Certainly in the two cases to be related it was the steady progress of the patients downhill which led to the adoption of surgical treatment. Another of the points noted above—namely, the occurrence of hæmatemesis—does not appear to be so common in children as in adults, but Osler has recorded one instance. The termination of splenic anæmia in Banti's disease, hepatic cirrhosis with ascites, seems open to question, at least as regards the majority of cases, and Osler and Senator have pointed out that ascites may occur as a terminal event in anæmia without any hepatic cirrhosis.

The first three of the above criteria give the essential features of the disease. It will be noted that they rather exclude other diseases than indicate any special characteristics of splenic anæmia. In addition the appearance of the patient is very striking, the profound pallor, with a creamy tinge in the skin generally. We hope it may be possible to add a fourth criterion of the disease, at least in the case of children—namely, the rapid disappearance of all symptoms after splenectomy. Further experience of the results of operative treatment must be obtained before this can be done. The treatment by splenectomy is not new. Armstrong[4] has collected from the literature 32 cases of splenectomy for splenic anæmia, with 23 recoveries and 9 deaths. At the same time, it must be noted that many cases are included in which the diagnosis is by no means clear. The operation has rarely been performed in this country. In the Transactions of the Clinical Society of London there is only one case of splenectomy for disease recorded; the disease was leukæmia and the result fatal. It

[1] A paper read at the Clinical Section of the Royal Society of Medicine on Dec. 9th, 1910.
[2] American Journal of the Medical Sciences, January, 1900.
[3] Clinical Journal, vol. xix., p. 403.
[4] Brit. Med. Jour. vol. ii., 1906, p. 1273.

is clear also from the recorded cases that too often splenectomy was performed as a last chance, when the disease had lasted for many years and when a successful result could scarcely be expected.

CASE 1.—The patient, a girl aged 12 years, was admitted to hospital on April 24th, 1906, suffering from rheumatism. For the previous two years she had been languid and complaining of pains in the extremities. At times the knee and other joints had been swollen and painful. No abdominal swelling had been noted previously to admission. The parents were healthy and there were five other children—all boys—alive and healthy. Four children had died—all girls—three of them when quite young, and the fourth from splenic anæmia at the age of 13 years. Her case has been published by Dr. Frederick Taylor in the Guy's Hospital Reports for 1895, under the title "A Case of Splenic Anæmia or Primary Splenomegaly."

On admission the patient was well nourished but distinctly anæmic, the skin having a pale yellow tint all over, and the lips having little colour. The conjunctivæ were not jaundiced. There was a deeper pigmentation, of a brown colour, at some pressure areas—e.g., above the knees where the garters had been worn. The left side of the abdomen was occupied by a large solid mass, evidently an enlarged spleen, which measured 8 inches in its longest diameter, as tested by percussion and palpation. There was no pain or tenderness about this swelling, which was freely moveable in all directions The liver was not enlarged and there was no bile in the urine. The heart was slightly enlarged and a soft systolic murmur was present at the apex, considered valvular in origin. Apart from the subacute rheumatism from which she was then suffering there was no evidence of constitutional disease, such as syphilis, tuberculosis, or malaria. There were no hæmorrhages and no enlarged lymphatic glands. The result of examination of the urinary system and of the fundus oculi was negative. The temperature at times reached 100° F. in the evening, but there were no definite pyrexial attacks. On admission the red blood corpuscles were 2,420,000, the hæmoglobin being 56 per cent., and the white blood corpuscles numbering 9800. A differential count of the white cells showed nothing abnormal. The results of the various blood examinations are seen in the accompanying chart. (Fig. 1.) It will be noted that on May 30th there is a condition of leucopenia, as is common in this affection, but the coexistence of subacute rheumatism may at other times have kept up the number of white cells, although a definite leucocytosis did not occur until after the operation. Treatment was carried out by means of arsenic, iron, X rays (three sittings), and full diet, and later the patient was sent to the convalescent home.

On readmission at the end of June the patient was distinctly more anæmic, and both red cells and the hæmoglobin were found to be diminished. After consultation it was decided to excise the spleen, and this was done on July 20th. The spleen with the contained blood weighed 2 pounds, and showed general hyperplasia of all the tissues. There was no marked shock after the operation, and when the effects of the anæsthetic had passed off the patient made a rapid recovery. Three days after the operation it was found that the red cells had increased from 2,500,000 to 4,700,000, and the hæmoglobin from 40 per cent. to 76 per cent., an improvement which was maintained until at the end of another week the red cells were normal in number. This alteration was also visible in the appearance of the child; the yellow tinge of the skin had gone, the cheeks were pink in colour, and the lips were taking on a healthy red hue. There was no compensatory enlargement of the lymphatic glands.

The further history of the case as regards symptoms of splenic anæmia is negative. A condition of subacute rheumatism continued for two years, during which mitral stenosis developed, and an attack of chorea occurred. She was seen again in November, 1910, at the age of 17½ years, and four years after the operation. She was then a well-grown girl in service as a nursemaid. The cardiac lesion persisted, but there had not been any symptoms of active rheumatism for two years. There were no marked signs of anæmia in her appearance. Blood examination showed red blood corpuscles 3,600,000, hæmoglobin 78 per cent., and white blood corpuscles 6400. The girl expressed herself as feeling quite well and able for her work.

CASE 2.—The patient, a girl aged 6 years, was sent to hospital on April 7th, 1910, by Mr. W. M. Noott of Kensington, with a diagnosis of anæmia and enlarged spleen. The mother stated that the child had been pale since birth, and that this pallor had not increased recently. She had been short of breath on exertion for some time. Two months previously she had had a feverish attack, with pain in the splenic region, and Mr. Noott had then discovered the enlarged spleen. There had never been purpura or any form of hæmorrhage. Her previous health had been good, and she had not suffered from any other form of illness. The family history was unimportant and revealed no other case of splenic disease.

On admission the child was found to be well nourished and of healthy appearance apart from the anæmia. The skin of the face was pale, of a creamy tint, with a faint pink flush on the cheeks. The lips, eyelids, and gums were pale. The yellowish tinge of the face was seen also in the conjunctivæ, and in the skin generally. There was no deeper staining over pressure points. Some of the cervical glands were slightly enlarged, but there was no evidence of any general glandular enlargement. A large solid mass was felt in the left side of the abdomen which was evidently an enlarged spleen. It extended downwards a finger's breadth beyond the umbilicus, and its longest diameter measured six inches. The spleen was freely moveable and not tender or painful. The liver was not enlarged and there was no bile in the urine. Examination of the blood showed red blood corpuscles 2,550,000, white blood corpuscles 6300, and hæmoglobin 34 per cent. No increased bleeding occurred on pricking for the blood examination. There was no evidence of disease in the cardiac, pulmonary, or renal systems. The fundus oculi showed no abnormalities. Von Pirquet's test and the Wassermann reaction were negative. The temperature usually rose to 100° F. at night, falling to normal in the morning. Epistaxis occurred once during her stay in hospital. The treatment was rest in bed, full diet, arsenic, and iron. After a fortnight in the hospital the patient developed measles and was sent home. During the summer she spent some weeks at the convalescent home and her colour improved considerably. The spleen varied in size from time to time, but only to a slight degree.

The patient was readmitted to the hospital on Oct. 8th, 1910. The only changes to be noted were the increasing pallor, listlessness, and tiredness. Examination of the blood on Oct. 10th gave the following result:—Red blood corpuscles, 1,870,000; hæmoglobin, 30 per cent.; white blood corpuscles, 2400; and colour index, 0·8. The red corpuscles were very various in size, megalocytes, microcytes, and all intermediate gradations being present. There was a little polychromatophilia in some of the corpuscles, but it was not marked, and there was no punctate basophilia. The red cells were normally shaped, poikilocytosis being absent. Nucleated red cells, all normoblasts, were present to the extent of about 600 per cubic millimetre. Amongst the white cells there were large hyalines (0·4 per cent.), myelocytes (1·2 per cent.), and mast cells (1·2 per cent.). After consultation it was decided to excise the spleen and this was done on Oct. 17th. The patient stood the operation well, there was no marked shock, and after the effects of the anæsthetic had passed off she had no untoward symptoms of any kind. The temperature continued normal after the third day. On removal the spleen showed no gross changes save its great size and congested appearance; it weighed one pound. As regards the histological changes, Dr. W. d'Este Emery found no very marked abnormalities of structure save the general hyperplasia. On Oct. 21st—four days after the operation—it was noted that the patient's colour had decidedly improved, that the lips were redder in colour, and that the yellow tint of the conjunctivæ and skin had gone. Examination of the blood on the same day confirmed these signs of improvement. A blood count gave red blood corpuscles 4,000,000, hæmoglobin 52 per cent., white blood corpuscles 10,800, and colour index 0·6. There were no abnormal red corpuscles, nucleated or degenerated forms, seen, and no abnormal leucocytes. The child improved daily, and the languor and listlessness which had been present all through the illness passed off. There was no compensatory enlargement of the lymphatic glands. On the seventeenth day after the operation the red corpuscles were 5,200,000, the white corpuscles 3400, and the hæmoglobin

was 65 per cent. The patient is at present—seven weeks after the operation—at the convalescent home, and is doing well.

The operation.—The steps of the operation call for little remark. In both cases the incision was made through the left rectus parallel and just internal to the left linea semilunaris. In the first the spleen was so much enlarged that its undue mobility allowed it to be dislocated into the wound and outside the abdomen with great ease. In the second case the mobility of the organ was not so marked, and the only difficulty experienced in the operation was to dislocate the spleen without injuring it. In order to accomplish this satisfactorily the outer edge of the incision had to be depressed forcibly with large retractors.

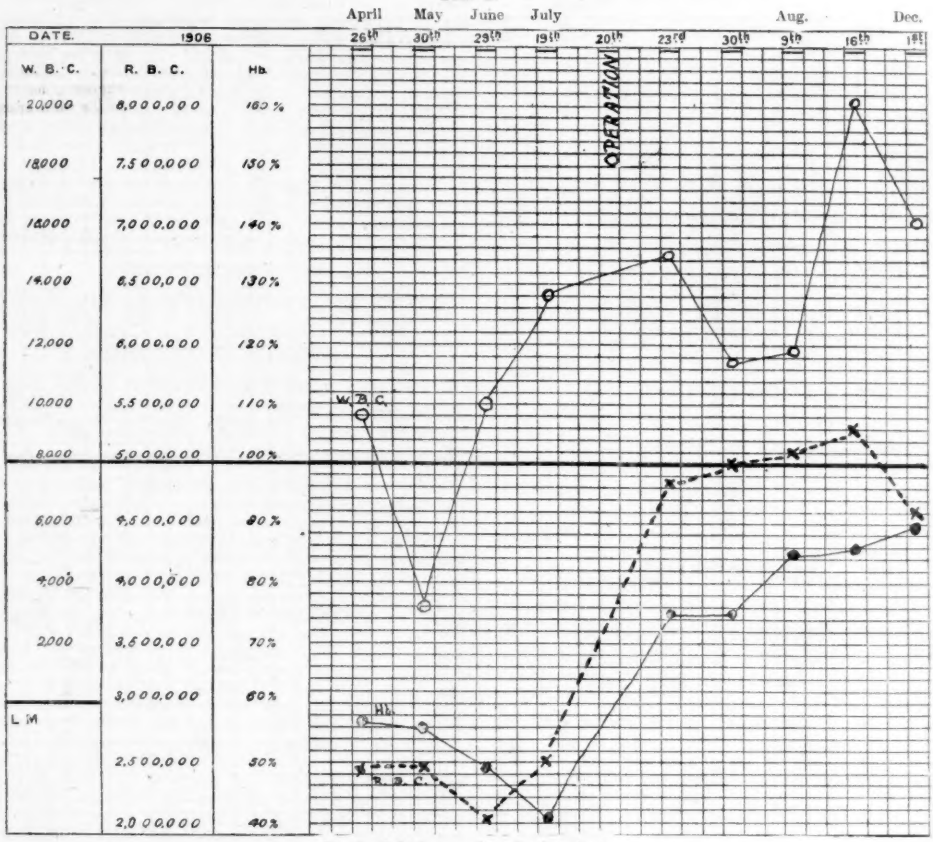
In neither case were there any adhesions between the capsule of the spleen and the abdominal wall, and the question of hæmorrhage never caused the least anxiety. The only bleeding was from the abdominal incision, and care was taken to reduce this to a minimum by clamping every bleeding point as it was met with. The actual removal of the spleen was done methodically as follows. When the spleen had been protruded through the wound, cautious traction was exerted so as to put upon the stretch the gastro-splenic omentum running from the hilum of the spleen to the fundus of the stomach. The anterior layer of this was then divided separately between pressure forceps, three pairs being used on each side of the line of division. This exposed the left gastro-epiploic artery and the vasa brevia lying in front of the posterior layer of the ligament. These vessels were pushed aside, while the smaller vessels were controlled at their entrance into the hilum by a large clamp forceps and the posterior layer of the omentum was then taken up in sections quite close to the fundus of the stomach by three pairs of pressure forceps and divided with scissors between the forceps and the clamp. This severance of the gastro-splenic omentum allowed the spleen to be rotated still further outwards, and pulled up into easy reach the lieno-renal ligament with the splenic artery and vein between its layers. This traction proved very useful as it converted this structure into a true ligament, so that it was easy to transfix it with one blade of the pressure forceps where it was clear of vessels. A large clamp was put on near the hilum, and the ligament and the vessels were then secured by two pairs of pressure forceps about half an inch nearer the spine, and the tissues were then divided between and the spleen removed.

An interesting practical point developed in connexion with the ligature of the vessels. In the first case no ligatures were applied until the spleen had been removed. It was then found that the forceps on the splenic vessels and the lieno-renal ligament at once retracted deeply into the abdomen under the vault of the diaphragm, and great difficulty was experienced in tying the ligatures owing to the cramped space in which the hands had to work. In the second case, therefore, each ligature was applied and tied immediately the forceps were freed by dividing the tissues upon which they were placed, and in this way no difficulty was experienced in securing every vessel as it was divided. The ligatures were of medium-sized chromic catgut and it was not judged necessary to reinforce them by a surrounding ligature.

The entire operation was done in a very short time and at no time was any shock apparent. The abdomen was closed in three layers in the usual way.

In this paper we are concerned with the pathology of splenic anæmia only so far as it relates to the question of

FIG. 1.



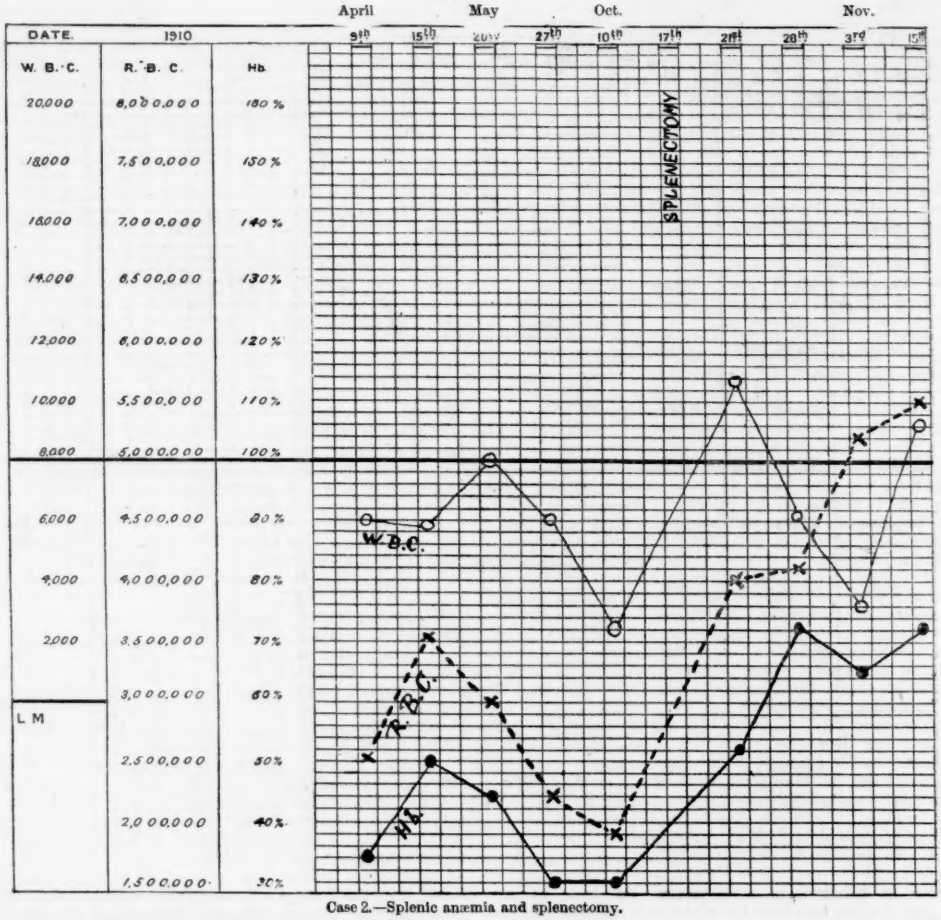
Case 1.—Splenic anæmia and splenectomy.

surgical treatment. There is no direct evidence of primary disease in any other tissue of the body than the spleen, and if a constitutional disease like malaria is present the case cannot be regarded as one of primary splenomegaly. Rolleston has suggested that "a chronic infective or toxic process has its headquarters in the spleen, and that the poisons produced there give rise in the first instance to endothelial hyperplasia and fibrosis of that organ, and later so inhibit blood formation as to produce anæmia of the type usually regarded as chlorotic." Our experience does not support the view that there is an inhibition of blood formation. We believe that the spleen is actively engaged in the destruction of blood cells. The yellowish tinge in the skin and in the conjunctivæ is probably due to active hæmolysis in the spleen—it is certainly not due to any disturbance of the liver function. The condition after splenectomy supports this view. The pigmentation of the skin and conjunctivæ disappears within a week, and at the same time the number of red cells and the amount of hæmoglobin increase with astonishing rapidity. If there had been inhibition of blood formation we should not have expected such a rapid return to normal, but if the blood-forming organs had been working at high pressure to make up for the destruction of red cells this rapid recovery, when hæmolysis had ceased, is exactly what would have been expected. In connexion with Case 2 it will be noted that the abnormal and degenerated red blood cells which were present before operation had entirely disappeared at the time of the first blood count after the operation. This also points to a condition of active hæmolysis in splenic anæmia, which ceases with the removal of the spleen.

The examination of the spleen, post mortem and after excision, has been most elaborately carried out, more especially by American investigators, and has failed to reveal any clear evidence as to the nature of the disease. The tendency has, therefore, been to fall back on some theory of toxæmia due to the changes in the spleen. Yet the toxæmic result may be described as an exaggeration of what is usually considered the normal function of the spleen—namely, the removal or destruction of red cells.

On the other hand, if we assume a loss of vaso-motor control in the splenic artery leading to overfilling of the spleen with arterial blood, it is possible to understand all the morbid changes in the spleen and in the blood. The spleen itself would be enlarged and its substance generally, Malpighian corpuscles, endothelial cells, connective tissue, &c., would be in a state of active hyperplasia. This is the usual condition found after splenectomy or post mortem, with the added changes which time has brought in prolonged cases. At the same time, the functional activity of the spleen would be increased, and the function which is usually ascribed to it is that of removing red corpuscles by means of its large endothelial cells. Instead of mere scavenging work it is easy to understand that these endothelial cells, in greatly increased numbers, may attack not only effete cells but those which are healthy, and that active hæmolysis and destruction of hæmoglobin follow. The hæmatemesis which is such a striking feature in many of the cases will be easily explained on the same assumption—i.e., that the arterial blood sent to the stomach through the splenic artery is excessive in amount, and over-distension and rupture of the stomach vessels result. An analogous condition is seen in the case of

FIG. 2.



Case 2.—Splenic anæmia and splenectomy.

the thyroid gland in Graves's disease. The thyroid is distended with blood, its tissues are in a state of hyperplasia, and its normal secretion is poured out in increased and toxic amount. We do not wish to press the analogy, but to emphasise the point that a disease of the thyroid is not assumed to be present in Graves's disease, but only a disturbance of function, and that similarly a disease is not necessarily present in the spleen in splenic anæmia, but simply a disturbance of function. If this be accepted, and if it be recognised that this disturbance of function will usually have a fatal termination, the operation of splenectomy will be fully justified and will probably be more extensively carried out in the future than it has been in the past.

As regards the ultimate result of the operation we can only give particulars in one case, the other having been so recently operated on. The first patient when seen at the age of 17½ years, four years after the operation, was a healthy girl without any signs of splenic anæmia. This result may be contrasted with the fate of her sister, who died at the age of 13 years from progressive anæmia and debility. In the published cases of this disease in which the spleen was successfully removed the ultimate result seems to have been a complete cure, records having been obtained up to eight years after operation. It is probable that the two factors present in our cases, the youth of the patient and the comparatively early stage of the affection, were of importance from the point of view of prognosis. While a preliminary course of medical treatment will naturally be adopted in all cases of splenic anæmia, experience has shown that it is never curative, and if the diagnosis is clear treatment by splenectomy should not be unduly delayed.

THE SURGICAL TREATMENT OF CANCER OF THE VULVA AND ITS PRE-CANCEROUS STAGES.

BY FREDERICK J. McCANN, M.D. EDIN., F.R.C.S. ENG.,

PHYSICIAN TO IN-PATIENTS AT THE SAMARITAN FREE HOSPITAL FOR WOMEN MARYLEBONE ROAD, N.W.; LECTURER ON GYNÆCOLOGY, MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, CHENIES STREET, W.C.

IT is a matter of common knowledge that the ultimate results of operations for vulvar carcinoma hitherto published are unsatisfactory, both local recurrence and recurrence in the inguinal and iliac glands being frequently observed. I believe the unsatisfactory results are due to the operations which are advised and practised for this disease either being incomplete or only employed when the disease is already advanced. Improved results will be obtained by the employment of a complete operation in the early stages of the disease. A nodule or a suspicious ulcer on a labium is not difficult to recognise, but what is of greater importance is to recognise and to treat the precancerous stages. Leucoplakial patches occur on the labia and precede the development of cancer, bearing a similar relationship to the disease in this situation as they do to cancer of the tongue. They are also commonly associated with a labial carcinoma, and it is absolutely necessary that they should be freely excised, for recurrence will certainly take place where such patches are situated. This important fact was impressed on my mind some years ago when doing the incomplete operation generally advised. I had removed the growth with a margin of healthy tissue from one labium, and at the operation I observed a white patch of about the size of a sixpence situated on the opposite labium. This was not removed, and 12 months later the patient returned with a cancerous growth which had appeared in the situation occupied by the leucoplakial patch.

Cancer of the vulva is essentially a disease of elderly women from 55 years of age onwards. When it attacks the labia there is frequently a history of pruritus which has existed for months or even two or three years. The skin of the vulva is white, sodden like the hands of a washerwoman, and numerous cracks or fissures are distributed over its surface. The pruritus continues, is aggravated by scratching, and later a cancerous growth makes its appearance. This sodden skin constitutes the precancerous stage, and when recognised in elderly women should be treated by free excision.[1] Well-marked leucoplakia is seen in younger women in association with syphilitic elephantiasis, and here, too, complete excision is indicated.

A further argument in favour of a more thorough excision is the frequency with which contact infection is observed in the labia, so that when one labium is affected it is not sufficient to do a limited operation, for the surface with which the growth has been in contact on the opposite side may have already been infected.

In every case, however early the disease, the vulva should be completely excised and the glands and fat removed from both inguinal regions. The operation is commenced by removing the inguinal glands. For this purpose an incision is made parallel with Poupart's ligament from the anterior superior iliac spine into the labium (see Fig. 1, B). Poupart's

FIG. 1.

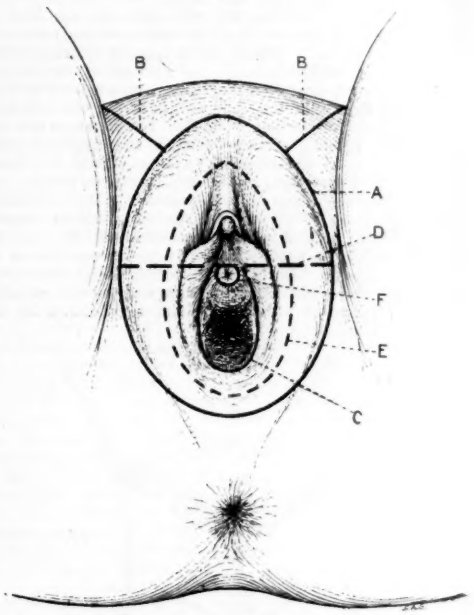


Diagram to illustrate the lines of incision described in the text. A, Incision employed for the removal of the vulva. B, Incision for the removal of the inguinal glands. C, Incision around the vulvar inlet. D, Incision required when the vulva is removed in two portions. E, Incision required for the treatment of severe pruritus. F, Incision around the urethral orifice.

ligament is defined and the glands and fat removed in one piece. Special care is taken to remove the fat and lymphatics at the inner part of the incision (B, Fig. 1). It is necessary to excise the gland in the saphenous opening, and may be others of the vertical set of glands. The gland in the saphenous opening, although it belongs to the vertical chain of glands, is frequently infected with cancer. The gland in the crural canal should also be removed, care being taken not to injure the femoral vessels.

In advanced cases the glands along the iliac vessels are involved in the disease and they can be removed after careful separation of the peritoneum by an incision corresponding to the middle third of Poupart's ligament made through the abdominal wall. Unfortunately, many of the patients are very old and not infrequently suffer from chronic bronchitis, and for these reasons do not stand an operation unduly prolonged. If, however, the patient's condition will stand it the iliac glands should certainly be removed. All hæmorrhage should be carefully arrested, and before stitching the skin all dead spaces should be obliterated by catgut sutures. The skin is then accurately sutured and a dressing applied.

It is sometimes stated that if the inguinal glands are not felt to be enlarged it is not necessary to remove them. If the inguinal glands are *not* enlarged there is greater reason for removing them, for it may indicate early implication and a better prognosis. If the inguinal glands are enlarged to any extent the iliac glands will also be involved and the

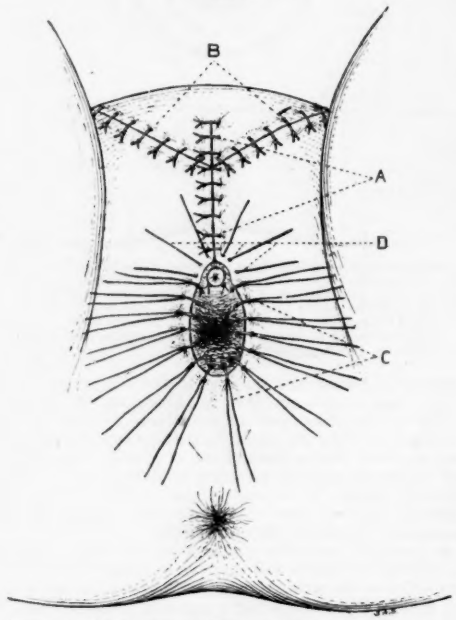
[1] Clinical Journal, Polyclinic Journal, Nov. 15th, 1905, p. 78.

prognosis is bad. I have removed inguinal glands no bigger than a pea which showed under the microscope well-marked cancerous invasion. Moreover, there is considerable difficulty in palpating the inguinal glands when the patient is fat, and many women who suffer from vulvar cancer have a tendency to obesity. *Inability to palpate the inguinal glands is no reason for neglecting to remove them, nor is it a reason for concluding that they are not invaded by the disease.*

When the inguinal glands and fat have been excised on both sides the patient is placed in the lithotomy position and the excision of the vulva is commenced. With a scalpel a curved incision is made on either side from the mons veneris downwards and outwards, terminating at a point midway between the anus and the vulvar inlet (Fig. 1, A). These incisions must be carried well beyond the labia majora. The incisions are deepened by snipping with the scissors, and the bleeding points are caught with Spencer Wells forceps. If the incisions are not made *into the labia* the vascular bulb is not cut into and therefore the amount of bleeding is lessened; a result which is aided by using scissors instead of a knife. Indeed, the amount of hæmorrhage during the whole operation should be comparatively trifling.

All the structures are removed down to the triangular ligament and the clitoris is divided. At this stage it is well to make a circular incision around the urethral orifice (Fig. 1, F) so as to define its position should the cancer be close to the urethral orifice, or a transverse incision may be made above the level of the meatus (Fig. 1, D) when the cancer involves the clitoris, and the vulva is then removed in two portions. In this way the urethra can be seen and avoided, and it is not necessary to pass a sound into the bladder as a guide. During all the manipulations the cancer should be covered with iodoform gauze and the two cut edges of the vulva grasped with a vulsellum to minimise the risk of cancer infection.

FIG. 2.



Illustrates the appearance when the operation is completed. A, Skin incision united. B, Incisions for removing the inguinal glands. C, Silkworm-gut sutures tied and left long to facilitate subsequent removal. D, Mattress sutures of catgut for fixing the meatus. They are represented untied.

After the structures have been freed all round a circular incision made around the vaginal orifice completes the excision (Fig 1, C). The bleeding points are now tied, and in so doing a needle armed with catgut is of service owing to the tendency there is for the vessels to retract in certain situations. Where the clitoris has been divided the hæmorrhage is best arrested by the passage of a mattress suture to embrace the divided vessels. All bleeding having been completely arrested, the edges of the incisions are now united by silkworm-gut sutures.

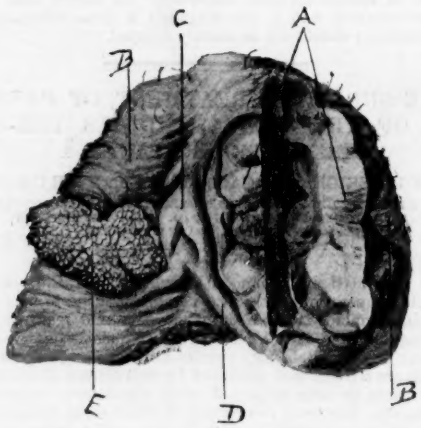
The urethra is fixed in position by lateral mattress sutures of catgut which pass through the sides of the urethra close to the meatus, and a median suture passing through the superior wall (Fig. 2, D). These sutures prevent the urethra falling downwards and tend to maintain the normal forward curve. Where it is found necessary to excise a portion of the urethra the cut end should be divided longitudinally and transversely and the four segments united to the skin edges with catgut.

The silkworm-gut sutures around the vaginal orifice should be left long as there is a tendency for the line of incision in this situation to be retracted towards the vagina, and the long threads facilitate removal. There should be no tension on the sutures if the skin edges have been judiciously undercut.

The wound is dressed with iodoform gauze, wool, and a T bandage. The inguinal wounds are redressed and a double spica domette bandage carefully applied.

I have now performed this operation ten times. In eight of the cases the cancer originated in the labium and two in the clitoris. All were microscopically squamous carcinomata. The healing was rapid and in no case was the use of the catheter subsequently required, the patients being encouraged to pass urine naturally.

FIG. 3.



A, Growth in left labium majus. It has been divided in the centre and the two halves pulled asunder to show how it is penetrating into the subjacent tissues. Note also the ulcerated surface. B, The skin of the mons veneris and labia majora. C, The clitoris. D, The left labium minus. E, The papilloma.

The routine employment of a more extensive operation in the treatment of this disease will, I feel sure, lead to much better results in the future. No operation should be considered sufficient which does not include the removal of the entire vulva and the glands and fat in both groins. The earlier such an operation is employed the better will be the after-results.

To excise the thickened white sodden skin associated with pruritus it is not necessary to cut so widely, but every portion so affected should be removed, otherwise the pruritus will not be cured and cancer may subsequently develop on the thickened areas left behind. When the region of the clitoris is involved this organ should also be removed.

This operation will be found a most valuable remedy for cases of intractable pruritus, and in elderly women in whom the peculiar changes in the skin have already occurred it may be the means of preventing the development of carcinoma. What I desire to advocate here must not be confounded with what is known as the Marion Sims operation, in which a very limited amount of tissue is removed around the vulvar inlet and which is recommended for cases of pruritus. In my operation a complete excision of all the sodden skin, including the clitoris if involved, is

done, so that every trace of disease is removed. The hæmorrhage is carefully arrested, and the wound edges then united with silkworm-gut sutures.

I believe this operation to be of great value, and if done more frequently would prevent the subsequent development of carcinoma. The great frequency with which long-continued pruritus antedates the development of vulvar carcinoma seems to have been overlooked, and when it occurs in an elderly woman prompt and radical treatment is required.

Fig. 3 represents the anterior portions of the labia majora with the clitoris and adjoining parts of the labia minora. The left labium majus is the seat of an extensive ulcerating carcinomatous growth which has invaded the entire thickness of the corium as far as the subjacent fat. Histologically the growth is a squamous-celled carcinoma, the cell columns of which show typical cell nests and central keratinisation. On the opposite labium majus there is a second growth about one inch in diameter which overlaps its base of attachment and presents an intact papillary surface beneath which the corium is uninvaded. Microscopically it is a papilloma. The specimen is preserved in the Museum of the Royal College of Surgeons of England (4690 c). The parts were excised by me from a woman, aged 69 years, who for six months had noticed a growth on the labium, from which there was a slight blood-stained discharge. She had previously suffered from pruritus, and the skin of the vulva presented a thickened whitish appearance. The patient could not say which of the two growths appeared first. With the vulva the glands in both groins were excised.

Wimpole-street, W.

THE VALUE OF VACCINATION AND REVACCINATION.

BY F. M. SANDWITH, M.D. DURH., F.R.C.P. LOND.,
GRESHAM PROFESSOR OF PHYSIC.

FOR more than a hundred years we have known how to prevent small-pox, a repulsive disease of great antiquity, which used to be a common scourge, and at the end of the eighteenth century was the cause of 1817 deaths every year in London alone.

Nearly twenty years elapsed between the time when Edward Jenner began to ponder over the connexion between vaccinia and variola and the day when he announced to an incredulous world "that the cow-pox protects the human constitution from the infection of small-pox." Like Bacon, Harvey, Newton, and Darwin, he preferred to delay the publication of a new truth for which he felt the world was hardly prepared. Before his famous *Inquiry* was published in 1798, Jenner travelled from Berkeley to London in order to exhibit the cow-pox to his professional brethren and prove to them that an individual who had been accidentally or purposely inoculated with vaccinia was rendered immune to subsequent inoculations of variola. We can imagine the cruel disappointment of the country practitioner when, at the end of three months, he was obliged to return home without having persuaded a single individual to be vaccinated! The medical profession was temporarily blind, while the public clung to the conservative belief that it was better to be inoculated with small-pox, with its preliminary horrors of bleeding, purging, and starving, than to test a novel method of prevention. The tide of opinion, however, shortly turned, and vaccine was carried to so many foreign countries that within ten years of its introduction upwards of 20,000,000 people were vaccinated, with the result of an immense reduction of the death-rate from small-pox. Yet in England, and especially in London, the opposition continued inexplicably. Hideous prints and scurrilous newspapers were published, and in 1807, when Parliament awarded Jenner a second grant of £10,000, a popular leader sent a messenger to his lodgings to advise him "immediately to quit London, for there is no knowing what an enraged populace may do."

Times have changed, but we still have amongst us an energetic body of antivaccinators, some of whom might be the lineal descendants of those who could not see that Jenner was a benefactor to mankind. The trend of modern legislation has invariably been to grant concessions to these agitators, and the Vaccination Act of 1907, which came into force on the first day of 1908, has been associated with an increase in the percentage of exemptions of children, in whose case a statutory declaration has been obtained. The figures for 1907, which are the latest published, show that only 70·9 per cent. of children born in England and Wales were vaccinated, a considerable reduction from 74·9, which was the average of the preceding five years. The percentage of children born who were exempted under certificates of conscientious objection has been increased from 4·8 in 1905 to 5·8 in 1906 and 8·4 in 1907, while it is believed that the figures for 1908 will show a further increase.

We must face the fact that we have among us an increasing number of persons who are susceptible to small-pox in consequence of the neglect of vaccination, and that the only other factor necessary to produce an epidemic is the introduction of the disease. We are unable to prophesy when the next outbreak will occur, but, as regards London, we can guess that, if history repeats itself, the day is not far distant when crowds of frightened people will be clamouring for revaccination, as they did when small-pox was last prevalent in 1902. The latest report of the Metropolitan Asylums Board tells us that during the 38 years of the existence of that Board 72,691 small-pox patients have been admitted to its hospitals, but statistics show that, whereas during the first 15 years of the Board's life London was visited by small-pox every third or fourth year, during the last 23 years these outbreaks have only occurred every seventh or eighth year. Moreover, it is satisfactory to know that for the third year in succession not a single death from small-pox has occurred in London. Besides a diminution of the visitation of variola there seems to have been a feebler intensity of the virus of late years in this country.

During 1908 small-pox occurred in 13 towns in England and Wales, the greatest number of cases being reported from Liverpool and Southampton, and in nearly every instance the infection appears to have been introduced from foreign countries. Six cases were notified from London and several in other towns during the first quarter of 1909. At Bristol a limited but somewhat severe outbreak occurred, causing 35 cases and 9 deaths, while in the neighbouring districts there were 22 additional cases with 3 deaths. The infection was introduced from abroad and was spread to some extent by the non-recognition of early cases until warning notices had been issued to local practitioners. Every year that small-pox becomes more rare there must be an increasing number of young medical men who have no real working knowledge of the disease, and in some recent outbreaks there has been a greater tendency than usual to confuse cases of mild small-pox with chicken-pox. On the other hand, in 1908 six persons in London certified to have small-pox were found on examination by an expert to be suffering from chicken-pox. The more unusual the disease, the more errors in diagnosis must occur. The failure to recognise a hæmorrhagic case at Bristol led to the second introduction of small-pox into a general hospital. The sanitary methods of fighting this Bristol outbreak may be taken as typical of what ought to be done under similar circumstances. All known contacts were immediately vaccinated or revaccinated, each patient being thus promptly surrounded by a circle of protected friends and relatives; all neighbours willing to undergo protection were revaccinated; every suspected case was at once isolated; contacts were traced and watched so effectually that 16,396 visits were paid to 1354 persons. If we cannot obtain complete protection by vaccination and necessary revaccination, we must perforce be content, directly a case of small-pox is discovered, with the intelligent coöperation of the sanitary authority and the board of guardians. The duty of the former is to isolate the sick and to supervise contacts, while the latter should at once vaccinate all known contacts and as many others in the district as are unprotected. The Bristol board of guardians refused to provide special facilities for vaccination, and furnished an additional argument for the transference of vaccination work from the control of the guardians to that of the sanitary authority, as recommended by the Poor law Commission. However, the necessary vaccination in Bristol was secured in spite of the unwillingness of the guardians to take special measures.

The comparative mildness of recent outbreaks in the United Kingdom is no guarantee that future epidemics will not be severe, though this is one of the points which antivaccinators fail to understand. Neither are they convinced by the

accumulated evidence of the immunity of efficiently re-vaccinated doctors and nurses in small-pox hospitals, facts which cannot too often be repeated to the public, not forgetting the exceptions to this immunity provided by nurses or other employees who have declined or evaded revaccination. Any fair-minded person should appreciate the lesson furnished by the nursing staff in 1892–93 at Leicester, where disbelief in vaccination is rampant. Among 40 nurses six refused to be vaccinated; one of these six caught small-pox and died from it, while four others contracted the disease and recovered. The sixth disbeliever, who escaped infection, was the matron, whose relations with the small-pox patients were of a less intimate character than those of the nurses.

One of the latest pieces of evidence of the immunity furnished by revaccination has been brought to my notice by Professor Osler.[1] At the end of October, 1898, the 2nd United States Volunteers were sent to occupy a district in the north of Cuba, which was said to be devastated by small-pox. The men were carefully revaccinated, and it was found on their arrival that the epidemic had been progressing since March and that there were some 4000 cases of small-pox, occasioning 30 deaths a day. By vaccinating 30,000 inhabitants in two months the small-pox mortality was reduced from 29·5 to 9·6 per cent., and the Americans then had the pleasure of burning the isolation hospitals which were no longer needed. Not a single case of small-pox occurred in the Volunteers, though the men were constantly exposed to a most malignant type of the disease, and served for six months in the district. Previously to the arrival of this regiment only 5·6 per cent. of the Cubans had been vaccinated, but it is worth mentioning that none of these died and their cases were all discrete.

Let me very briefly recapitulate the facts which prove the value of vaccination.

1. There has been a marked fall in the mortality from small-pox in all countries dating from the time of introduction of vaccination.

2. The vaccinated suffer much less from small-pox than the unvaccinated. Medical men, for instance, have a well-proved immunity, though in scarlet fever, against which doctors have no special protection, the statistics show that 59 per 1,000,000 die, as against 16 per 1,000,000, of the general population.

3. The age-incidence of small-pox is quite different since the introduction of vaccination. Formerly most children took it, and in Gloucester, where 85 per cent. of the children were unvaccinated, 64 per cent. of the patients in the small-pox epidemic of 1898 were children under ten years of age. To-day, where infantile vaccination is thoroughly carried out, most of the patients are adults; for instance, in Glasgow in 1900 only 5·5 per cent. of 1730 small-pox cases were under the age of ten, and of these children two-thirds had never been vaccinated.

4. The vaccinated, even if not efficiently protected by revaccination, have a much lower death-rate when attacked by small-pox than the unvaccinated. In the London epidemic of 1900–01, 9659 cases were treated in the small-pox hospitals of the Metropolitan Asylums Board, and of these 11·5 per cent. of the vaccinated and 33·1 per cent. of the unvaccinated died.

5. Systematic successful revaccination protects from small-pox. The German Government in 1874 made vaccination obligatory during the first year of life and revaccination at puberty. Since 1875 there have been no epidemics of small-pox in Germany, and the disease there is almost extinct. It is frequently introduced by foreigners, particularly on the Russian and Austrian frontiers, but it can find no resting place. In Prussia, where the population has been steadily increasing from 35 to 38 millions, the small-pox deaths for six years have varied from 10 to 41, being an average of considerably less than 1 per 1,000,000. This figure compares well with the year 1872, when 2700 Prussians per 1,000,000 died from small-pox.

6. In many small-pox hospitals it has been necessary to keep healthy children for weeks in the wards whilst their mothers underwent the disease; the children remained healthy, and were protected by one thing only—prompt vaccination.

There are several points connected with the question of vaccination which I venture to think are not always remembered. Jenner hazarded the guess that vaccinia was small-pox modified by passing through the cow, but for many years after his death no one could explain how the immunity was acquired. Proof has recently been obtained that monkeys can be infected with both vaccinia and variola, and that in them the diseases run much the same course as in man.

In Dr. S. Monckton Copeman's experiments human small-pox material was first tested on calves, but always with negative results. But inoculation of this material on monkeys invariably proved successful, and when, after one or more passages through monkeys, calves were again inoculated, an effect was produced which, after one or more removes in that animal, could not be distinguished from typical vaccinia. From the vesicles of these calves children were vaccinated, and every one of these vaccinations passed through its course normally. The importance of these experiments consists in the fact that they gave us scientific confirmation, to an extent previously unattained, of the definite relationship of cow-pox to small-pox. The mystery has yielded to investigation, and we may now agree that vaccinia is small-pox which has lost its virulence and its infectious character. Jenner's labours have helped to make the present generation understand the idea of immunity from specific diseases and the methods of procuring temporary immunity by introducing into the body a weakened or altered form of the virus producing the disease. Small-pox no longer stands alone as the one disease which we can prevent by vaccination, for, to mention human diseases only, we have acquired means of preventing, under certain circumstances, hydrophobia, plague, cholera, and typhoid fever.

Jenner before his death was forced to the conclusion that vaccination did not protect an individual from small-pox for the whole of his life, and we now know that the operation must be repeated at intervals in order to ensure the highest degree of protection which vaccination can give. Is the value of revaccination, say at puberty, sufficiently brought before the public by the profession? At how many schools in this country is it systematically carried out? Have we, the legitimate advisers of the public, not become somewhat supine and allowed our opponents to capture too many strongholds?

The Government Lymph Establishment at Colindale-avenue, N.W., supplies the army and all public vaccinators with excellent calf lymph, glycerinated, bacteriologically examined, and so prepared as to make it impossible to convey any other disease; but this lymph is, unfortunately, not available for the private practitioner. During the year ending March, 1909, the number of tubes of lymph despatched was 499,820, each tube containing sufficient lymph for one vaccination. Reports from 446,492 cases show 99·3 per cent. case success and 95·9 per cent. insertion success. The year's lymph was derived from 320 calves, all of which were examined after death and certified to be healthy. Four other calves, which seemed healthy during the course of their vaccination, proved at the necropsy to exhibit evidence of tubercle; none of the lymph from these four calves was issued.

In Germany there are said to be 22 State laboratories for the preparation of glycerinated calf lymph. It is regrettable that in Great Britain there is but one. The private practitioner can procure reliable lymph from at least two well-known institutes in London as well as from other vendors, none of whom, however, are under Government control, so that he has, for the most part, no guarantee as to the age and quality of the lymph, or as to its source of origin.

Is the operation of vaccination always performed under strict aseptic precautions? What instructions are given to the mother about the after-care of the vaccinated arm? Public vaccinators, whose work is inspected by the Government, and who receive a money grant in proportion to their success, strap a pad of wool, with or without a sprinkling of boracic powder, to the child's arm and forbid any interference with the arm for a week. Others, who are content to use no precautions, or to tie a dressing to the arm which the mother can remove at will, would be horrified to see the septic tricks which are sometimes played at home with the sore arm, and in such cases it is wonderful that abscess and erysipelas do not more often occur. Again, the public vaccinator inserts lymph into at least four places, and naturally complains that some of his colleagues, to please the friends, make only one or two insertions. Judging by

[1] Small-pox as Found and Treated in Cuba during the Spanish-American War, Pennsylvania Department of Health, August 9th, 1909.

analogy, we should expect that one insertion might be sufficient, but we know from the statistics of many small-pox hospitals that the highest protection is afforded by a total area of marks of not less than one-half of a square inch. The public vaccinator further complains that his unofficial colleagues sometimes give a certificate as successful vaccination when there is only one spot of doubtful value. If such a patient eventually contracts small-pox this obviously throws discredit on the value of vaccination.

I feel constrained to mention these criticisms because, with the present facilities for obtaining pure calf lymph, I do not see why the Registrar-General should have to report every year a few deaths from "cow-pox and other effects of vaccination." Lastly, we may agree with antivaccinationists that general hygiene, including prevention of overcrowding, prompt diagnosis and isolation, disinfection, and watchful care of contacts, are all valuable auxiliaries in the fight; but, in the words of Milton—

> "What boots it at one gate to make defence,
> And at another to let in the foe?"

Cavendish-square, W.

A FATAL CASE OF ANÆMIA IN WHICH THE WIDAL REACTION WAS OBTAINED.

BY PERCY GULLY, M.R.C.S. ENG., L.R.C.P. LOND.

A CASE of pernicious anæmia complicated by enteric has probably never been recorded. This may have been such a case, and it is as well that it should not go unnoticed.

The patient, an unmarried girl, aged 22 years, had been healthy and of good colour until the present illness. She had always been subject to slight menorrhagia, which, however, had never affected her health and had been no worse latterly. She had never had typhoid fever or any symptoms pointing to it. Measles had been her only illness. The patient thought that her illness dated from about August 20th, 1909, when she began to notice dyspnœa on exertion. She consulted her medical attendant on August 28th. He found her a little paler than usual and there was a hæmic bruit. She was put on iron and arsenic, given suitable directions, and seen again on Sept. 10th. She was no better, but a careful examination revealed nothing further. Her temperature was normal. There was nothing at this time to suggest to the medical man in attendance, a very able and experienced physician, that this was the commencement of a serious and fatal illness. On the 20th she left home for a change of air and came under my care for the first time on the 28th. From the time she left home she became rapidly worse, weaker, paler, and more breathless, and was compelled to take to her bed on the 29th. She did not improve, and four days later I was asked to see her. For about a month before this she had been slightly constipated. There had been no wasting. She thought she had had slight occipital headache about a week ago (? Sept. 21st). The headache had lasted only one day. The patient menstruated at the usual time early in September. She had had no abdominal pain, vomiting, diarrhœa, melæna, cough, rigors, or sweating—in fact, no symptom beyond what has been recorded. The following notes of the patient's condition were made on Sept. 28th:—"Deadly waxen pallor, suggesting pernicious anæmia. Rather inclined to be stout. Face full, not in the least drawn or cachectic. Pleasant expression. Talks cheerfully, but is breathless. She lies on her back. Pupils equal and moderately contracted. Skin dry. She has no pain. Pulse 120, low tension; temperature 100·5° F.; respirations 26 when quiet, but alarming dyspnœa on least exertion. No restlessness. Very healthy condition of teeth and gums. Tongue pallid but not furred. No enlarged lymphatic glands. *Heart:* Diffuse impulse in nipple line fifth space. Systolic bruit all over cardiac area. Most marked at second left space. Is carried from apex into axilla. Heard below scapula. Carotids throbbing. No obvious increase in cardiac dulness. *Lungs:* Nothing to be noted about lungs and pleura except feebleness of respiratory murmur all over chest. *Abdomen:* No distension or rose spots. Abdomen moves well. No sign of free fluid in peritoneum. No pain or tenderness on deep pressure. No enlargement of liver or spleen is evident. No mass or resistance in pelvis or elsewhere. In fact, abdominal examination quite negative. Rectal examination not made at this time, but subsequently a thorough examination gave negative result. Urine: S.G. 1020, alkaline, amber-coloured, no sugar or albumin. No diminution in quantity has been noticed." The condition of the patient remained about the same during the 29th and 30th. The period commenced on Oct. 1st (a few days before expected). There was slight epistaxis on this day. The period lasted four days and there was slight menorrhagia during second and third days. Menstruation almost ceased on the fourth day. On Oct. 3rd the patient complained of slight blurring of vision of the left eye. On the 4th she had blurring of vision in the right eye, but the left eye was almost well. The pupils were equal and not dilated. The right pupil was dilated and the fundus was examined. Recent retinal hæmorrhages were seen. The fundus was very pale. Widal's test was negative. A blood count gave red cells 1,500,000, hæmoglobin 25 per cent., and colour index 0 83. Films showed slight poikilocytosis; no nucleated red cells and no obvious leucocytosis. On the 5th, 6th, 7th, and 8th there were troublesome vomiting and nausea. The temperature was of remittent type. The patient obviously was in a desperate condition. Syncope and dyspnœa intervened on the least exertion. The constipation was easily relieved by enemata. The patient's expression was becoming anxious and she refused a great deal of the fluid food offered her. On the 7th she looked like a corpse. There was a peculiar odour about the bed—a cadaveric odour. During the last three days of her illness the pulse-rate was between 130 and 140, and the respirations ranged from 30 to 40. On the 8th the medical attendant already referred to and myself examined the blood and the result was somewhat remarkable, giving red cells 572,000 per cubic millimetre, hæmoglobin 14 per cent., and a colour index normal or slightly above it. Films showed few poikilocytes and no obvious leucocytosis. Nucleated red cells were not seen in the two films examined. This examination was done 18 hours before death, and while doing it I took another specimen for a Widal test—quite as an after-thought. The result (not known until after the patient's death) *gave a positive reaction in dilutions of 1 in 30 and 1 in 50 within one hour.* This dilution and this time would make the reaction a very certain one. On the morning of the 9th the patient died after a night of delirium, alternating with intervals of complete consciousness. No post-mortem examination was made, but a thorough bimanual examination of the abdomen and pelvis revealed nothing to suggest internal hæmorrhage.

I may say that her own medical attendant was astonished at the pallor of his patient on Oct. 8th, just a month from the time he last saw her. He believed her case to be one of the severer anæmias, and he did not alter his diagnosis when I told him of the positive Widal reaction—a reaction in such a dilution and in such a time as to make it almost a certainty that the patient giving it was suffering or had suffered from enteric fever. I must say that I agree with him, but typhoid fever may have come in as a complication. Oral sepsis was absent, and this plus the fact that no nucleated red cells were seen in the two or three films examined are the only points against acute pernicious anæmia, complicated, it may be, with enteric fever in an early stage. The colour index had risen between the counts of Oct. 4th and 8th. It is reasonable to suppose that a further rise might have occurred. A blood count so extraordinarily low as 572,000 recalls the fact that Osler's series of 18 cases, in which the blood was examined on the day of death, all exhibited less than 700,000 red cells per cubic millimetre. My count was made 18 hours before death, and, so far as I know, in no condition other than pernicious anæmia is such a diminution of red cells observed.

Is it possible that some cases of the severer anæmias possess a blood serum abnormally charged with the substances which cause Eberth's bacilli to agglutinate? Although I put this forward as a mere possibility, it does seem worth while to test the agglutinating power in similar cases. An exceptionally high agglutinating power would be *additionally* suggestive of an intestinal origin to these fatal cases, and might give some hint as to the nature of the organism causing pernicious anæmia. It will be observed that the whole of the illness only occupied seven weeks. Osler relates a case which was fatal on the tenth day.

I am aware of the deficiencies in these notes from the pathologist's point of view. Notwithstanding this, I feel that such a remarkable case ought not to go unrecorded.

The case was treated as one of pernicious anæmia with a restricted diet in view of the possibility of enteric being a complication.

Shanklin.

ON THE USE OF PITUITARY EXTRACT IN OBSTETRICS AND GYNÆCOLOGY.[1]

BY S. JERVOIS AARONS, M.D., C.M. EDIN., M.R.C.P. LOND.,

GYNÆCOLOGIST TO ST. ANTHONY'S HOSPITAL, NORTH CHEAM.

THE briefest possible mention of the anatomy, physiological properties, pharmacology and therapeutic action of the pituitary gland and its extract will be useful to introduce my subject.

Anatomy.—The pituitary gland consists of three parts—the anterior lobe, the pars intermedia, and the posterior lobe. The anterior lobe (hypophysis) is the larger and is made up of cubical or polygonal epithelial cells; in structure it is rather like the fœtal thyroid (Blair Bell[2]). Disease of this part of the pituitary gland is associated with the condition known as acromegaly. The pars intermedia lies between the anterior and posterior lobes and is developed in connexion with the anterior lobe. The posterior lobe is connected with the floor of the third ventricle, from which it is developed by the neck or infundibulum. In man both neck and body are solid, with traces of a cavity in the neck.

Physiology.—In the earlier days of medicine physicians held the idea that the function of the pituitary gland was to secrete nasal mucus, and from this belief the gland derived its name (pituita = mucus or phlegm). It was shown that removal of the gland in its entirety in animals produced great depression, increasing muscular weakness, dyspnœa, progressive emaciation, and finally death. Removal of the anterior lobe leads to genital infantilism. The pituitary gland generally hypertrophies after removal of the thyroid and suprarenal glands, and after castration. Insufficiency of the pituitary gland is associated with muscular weakness, wasting, and modification of the skeletal structure. Excessive secretion of the pituitary gland is followed by high arterial tension, polyuria, glycosuria, and acromegaly.

Pharmacology.—In 1894, Schäfer and Oliver[3] discovered that the extract made from the whole pituitary gland, when injected intravenously, caused a marked rise in blood pressure akin to, but not so powerful as, that caused by the extract of suprarenal gland, which they first discovered. Later, Howell[4] showed that this rise of blood pressure was produced only by an extract of the posterior and infundibular portion of the gland, and this observation was subsequently confirmed by Schäfer and Vincent.[5] The rise of blood pressure is due to a general vaso-constriction, the beat of the heart being, as a rule, slower. Schäfer and Magnus[6] observed that the extract of the posterior and infundibular portions of the gland caused marked diuresis. It was found by H. H. Dale[7] that uterine contractions were produced by intravenous injections of an extract of the gland; later, Blair Bell and Hick[8] described more fully the action of pituitary extract on the uterus and were the first to point out its effect upon intestinal muscle. It may be said that the extract of the posterior lobe and infundibular portions of the pituitary gland is a general stimulant of plain muscle, the organs which appear specially affected being the arteries, spleen, and uterus. The active principle diffuses slowly through animal membrane. It is less active than the suprarenal extract in producing local anæmia. It is absorbed slowly from the stomach and is destroyed by pancreatic digestion. It should therefore be administered by intramuscular or intravenous injection.

Therapeutics.—The first to use pituitary extract clinically was F. Golla.[9] A patient suffering from advanced Addison's disease was given a subcutaneous injection from which a marked rise of blood pressure and diuresis resulted, the latter continuing for 24 hours. Delille[10] tried the extract in such various conditions as typhoid fever, tuberculosis, Graves's disease, and paralysis agitans, as a result of which experience he recommended it in those conditions when it is considered desirable to raise the blood pressure, lessen the rate of the pulse, produce diuresis, and exert a stimulating effect on nutrition. To Blair Bell, however, belongs the chief credit of having systematically used the pituitary extract clinically. He, after numerous experiments on animals in conjunction with Hick, gave it a thorough trial in cases of shock, uterine atony, and intestinal paresis. The value of the extract in shock had been previously pointed out by Lockhart Mummery and Symes,[11] but only experimentally, because they were deterred from using it clinically owing to the powerful action of the extract and uncertainty as to the uniformity of its preparation at the time.[12] In June, 1909, through the courtesy of Messrs. Burroughs, Wellcome, and Co., who supplied me with a quantity of the extract, I was enabled to give the drug a thorough trial. The extract of the infundibular body of the pituitary gland is put up and placed on the market by Messrs. Burroughs, Wellcome, and Co. in hermetically sealed glass flasks which they have issued under the name of "Vaporole," each vaporole containing 1 c.c. of sterile extract equivalent to 0·2 gramme of fresh posterior lobe and infundibular portion of the pituitary gland. As the activity of the preparation is not destroyed by boiling, each flask and its contents are sterilised in this manner. The stability of the pituitary extract has been proved by comparing a sample a year old with a fresh preparation, and the effects produced by the two samples were equal within the limits of experimental error. The contents of each vaporole constitute the ordinary dose for an adult, whilst for children the dose should be proportionately diminished. An extract of the infundibular portion of the pituitary gland is also put up by Parke, Davis, and Co., under the name of "Pituitrin" in ampoules containing 0·5 c.c.

When it is necessary to give a second dose it should be remembered that such will not produce more than a small fraction of its proper effect unless some time has elapsed since the previous dose was given. It is important to note that infundibular extract, like other powerful pressor substances, has been shown experimentally to produce arterial degeneration if administration is long continued. (I shall refer to this again.) The extract is essentially a remedy for emergencies and is only to be used in a routine method with the greatest possible caution. I append here a short note of some of the cases in which I have used the pituitary extract. I have applied it in 70 cases altogether, but, as many of these were of a similar nature, for the sake of brevity they are not all particularised. For the purpose of contrasting this preparation with that of ergot and its allies—namely, ernutin, tyramin, &c.—I have used the pituitary extract in a number of cases of normal labour and have found that the uterus contracts better and more quickly and that the contraction remains for a longer period than when ergot or the other preparations have been employed. I have never used it, nor do I think it should be used, until after the completion of the third stage of labour, with the possible exception of certain cases of placenta prævia. The only drawback at present to its general use is on the score of expense, but it is within the bounds of possibility that the active principle of the infundibular portion may be synthesised by chemists, when the cost will be materially reduced.

CASE 1.—A woman, aged 27 years. Secundipara. Her first parturition was an interesting one. The child weighed 12½ pounds. There was marked deficiency of liquor amnii. The head was in the right occipito-posterior position and could not be rotated, being delivered in this position with forceps. The placenta and membranes were adherent and had to be removed manually. There was smart post-partum hæmorrhage which was checked by an intra-uterine douche of water at a temperature of 120° F., an intramuscular injection of ergotin, and by kneading the

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[1] A paper read at the Fifth International Congress of Obstetrics and Gynæcology held in St. Petersburg, September, 1910.

[2] W. Blair Bell: Brit. Med. Jour., Dec. 4th, 1909, p. 1609.

[3] G. Oliver and E. A. Schäfer: Journal of Physiology, vols. xv., xvii., and xviii., 1894–95.

[4] W. H. Howell: Journal of Experimental Medicine, vol. iii., p. 254, 1898.

[5] E. A. Schäfer and Swale Vincent: Journal of Physiology, vol. xxv., p. 1, 1899–1900.

[6] E. A. Schäfer and R. Magnus: Ibid., vol. xxvii., p. 9, 1901.

[7] H. H. Dale: Ibid., vol. xxxiv., No. 3, 1906.

[8] W. Blair Bell and P. Hick: Brit. Med. Jour., February, March, and December, 1909.

[9] F. Golla: THE LANCET, Feb. 15th, 1902, p. 442.

[10] Delille: L'Hypophyse et la Médication Hypophysaire. Published by G. Steinheil, Paris.

[11] Lockhart Mummery and Symes: Brit. Med. Jour., Sept. 19th, 1908, p. 786.

[12] Since the above paper was written an interesting article by Mr. George Rowell, senior anæsthetist at Guy's Hospital, has appeared in which he gives his experience with pituitary extract in the treatment of shock. Brit. Med. Jour., Sept. 17th, 1910, p. 767.

uterus. Her second labour was induced at the thirty-eighth week owing to the large size of the fœtal head, which was in the right occipito-posterior position, but was easily rotated. Delivery was accomplished normally, but the placenta had to be expressed by Credé's method. There was some post-partum hæmorrhage, but not so severe as in the first labour, which was controlled in the same manner as in the first confinement. The third labour was normal as far as position and delivery of the child was concerned, but again the placenta had to be expressed, immediately after which there was a smart rush of blood. An intramuscular injection of the pituitary extract was given and the bleeding ceased at once, while the uterus was firmly contracted and remained so for over three hours.

CASE 2.—A woman, aged 38 years. Secundipara. This case was one of placenta prævia; the bleeding commenced at the fourth month, but was checked by rest in bed, opiates, and neutral cotarnine phthalate. It recommenced at the fifth month and continued intermittently until five and a half months, when there was a smart hæmorrhage. The membranes were ruptured, version was performed, and a leg brought down, the fœtus being expelled naturally three hours later, the placenta being adherent and having to be removed manually, which procedure was accompanied by profuse hæmorrhage. An intra-uterine douche of weak perchloride of mercury was given at a temperature of 120° F., and pituitary extract was injected deeply into the buttock, after which there was no further loss and the uterus remained well contracted.

CASE 3.—A woman, aged 36 years. Secundipara. Labour was precipitate, the second stage consisting apparently of only a couple of pains; the child was born before my arrival, the nurse informing me that it was literally shot out, and the placenta followed in half an hour, by which time I was with the patient. There was considerable hæmorrhage; pituitary extract was injected deeply into the buttock and the bleeding ceased at once, the uterus contracting firmly.

CASE 4.—A woman, aged 32 years. A primagravida. Labour was uneventful, but after the expulsion of the placenta the uterus was relaxed and flabby, though no bleeding occurred. An intramuscular injection of pituitary extract was given, when the uterus immediately contracted and remained so.

CASE 5.—A woman, aged 37 years. A large multilocular ovarian cystoma, with a twisted pedicle and numerous adhesions, was removed without rupturing the tumour, but the adhesions were difficult to separate and caused some delay. At the completion of the operation, which lasted nearly an hour, the patient was in a state of shock, the pulse being small and compressible. Rectal injections of normal saline solution and an intramuscular injection of pituitary extract were given, the effect being instantaneous, and the pulse immediately became full and the tension high. On the second day there was a good deal of abdominal distension, and as no flatus had been passed a rectal injection of turpentine was given, the rectal tube being passed later but without result. As her condition now gave rise to some anxiety and the patient was restless and complained a great deal of pain, an intramuscular injection of pituitary extract was given, and in 15 minutes large quantities of flatus were passed. From this time on she made a rapid and satisfactory recovery.

CASE 6.—A woman, aged 28 years. This was a case of subinvolution of the uterus, the patient suffering from menorrhagia, for which she had recently been curetted but with no satisfactory result. Her uterus was enlarged (the cavity measuring 5 inches) and flabby, her tissues generally were soft and flabby (she might be termed "of the heavy lethargic blonde type"), and her blood pressure was low. I decided to try what effect repeated doses of pituitary extract might have, and accordingly gave her an intramuscular injection of this drug, taking her blood pressure at intervals, giving in all six injections spread over as many weeks. I was justified in my expectations, for her uterus contracted down, the cavity of that organ when measured by the sound being found to be 3 inches, while her general condition was much improved, for, in her own words, she "had not felt so well for many years," and after the lapse of six months her condition is still quite satisfactory. Incidentally, I might add that during the administration of the pituitary extract she had marked polyuria.

In recording this case I must refer to my remarks concerning the routine use of pituitary extract. I still think that this drug is one for emergency cases, but the low blood pressure and general flabby condition of this patient warranted, in my opinion, a trial of pituitary extract. In this particular case there have been no deleterious effects whatever, such as arterial degeneration. These cases, however, are few and far between, but should one of a similar nature present itself to me I should be inclined to repeat the experiment. I can find no recorded instance of the employment of this drug in subinvolution of the uterus, and only suggest its use in this condition provided that the subinvolution is associated with a low blood pressure.

CASE 7.—A woman, aged 24 years. This was a case of secondary hæmorrhage following an operation for perineorrhaphy. I was called in consultation by the medical man who had performed the operation the previous afternoon. The nurse was apparently an incapable woman who had not noticed that the patient was bleeding, and it was not until the following morning when the doctor paid his visit that the condition was recognised. He immediately sent for me, and when I arrived the patient was blanched and pulseless, she was sighing and throwing her arms about, but when I examined her I could see no signs of bleeding. The wound had broken down slightly but the bleeding had ceased, and as her condition was grave in the extreme I gave her an injection of pituitary extract and a large submammary injection of normal saline solution. The wound was plugged tightly with gauze steeped in adrenalin solution, a firm bandage applied, and continuous injections of normal saline solution were ordered to be given by the bowel. In less than 20 minutes after the injection of the pituitary extract the pulse was perceptible at the wrist, and in an hour it was quite distinctly beating at the rate of 120 per minute. I ordered another dose of pituitary extract to be given in an hour's time, and next morning her pulse was still 120 beats to the minute but full and of good tension. The pituitary extract was repeated twice that day and saline injections were continued. The patient made ultimately a good recovery, and I am convinced that she owed her life to the use of the pituitary extract.

CASE 8.—A woman, aged 23 years. Primipara. Her first labour was terminated by forceps owing to a tedious second stage. The child in the present labour also had to be delivered with forceps owing to inefficient pains; there was smart post-partum hæmorrhage caused by an atonic uterus, but this was quickly checked by an injection of pituitary extract deep into the buttock.

CASE 9.—A woman, aged 37 years. This was a case of a large multilocular ovarian cystoma weighing 10 pounds. There was no difficulty in the operation, the cyst being removed intact, but the patient developed intestinal paresis and retention of urine; the latter was relieved by catheterisation, but the former, which was causing acute discomfort, was not relieved until after the injection of pituitary extract; 20 minutes later a large quantity of flatus was passed, which gave the patient much relief. She was up on the tenth day, and left the nursing home at the end of the second week.

CASE 10.—A woman, aged 22 years. This patient had an ectopic gestation at about the third month, the operation presenting no difficulty beyond some adhesions of the sac to the bowel which took a little time to separate. There was a considerable amount of intestinal paresis on the third day, which yielded promptly to an injection of pituitary extract.

CASE 11.—A woman, aged 32 years. This was a case of abortion, the removal of the ovum being accompanied by the most alarming hæmorrhage which it has been my lot to see. The ovum was removed in its entirety, but the hæmorrhage still continued and douches of water at a temperature of 120° F. failed to check it; the uterus was firmly packed with gauze and an injection of pituitary extract was given, after which the patient was put back to bed very collapsed and in a state of profound shock. Next morning, on removing the gauze plug, the hæmorrhage recommenced, but was checked by another injection of the same drug. Later there was considerable abdominal distension accompanied by great pain, and a third injection of pituitary extract was given which resulted in the passage of large quantities of flatus with considerable relief to the patient. I have never seen a case of abortion accompanied by such a tremendous loss of blood as this patient suffered, or one which gave rise to so much anxiety. Her convalescence, although prolonged, was ultimately complete.

Of the other cases in which I have used this preparation I do not propose to speak, as some were normal confinements and the others were cases similar to those I have already mentioned. In order to economise time I have condensed the notes of the cases reported above to the narrowest limits, but I think that I have mentioned a sufficient number to warrant my laying before the notice of this important assembly so valuable a drug as pituitary extract as an addition to our armamentarium in the treatment of hæmorrhage, intestinal paresis, and shock.

Harley-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

PROTRUSION OF THE URINARY BLADDER INTO THE INGUINAL CANAL.

BY A. H. GIFFORD, M.R.C.S. ENG., L.R.C.P. LOND.,
LATE HOUSE SURGEON, ROYAL SURREY COUNTY HOSPITAL, GUILDFORD.

AN interesting condition, and one of some import, is that of protrusion of the urinary bladder through the anterior abdominal wall in the inguinal region. I have recently met with two such cases. In both instances the patients were sent into hospital for radical cure of inguinal hernia.

The first case was that of a child 5 years of age. The "rupture" was on the left side in the inguinal region, and had only been noticed for five months or thereabouts. No swelling was present when the patient stood upright, even after he had been on his feet for some time. Both testicles were in the scrotum. There was a scar on the right side resulting from an operation for a cure of a "rupture" when a baby. On coughing there was a protrusion on the left side of a swelling of the size of a date in the lower half of the inguinal canal, but which immediately disappeared; repeated coughing did not increase the size of the swelling. On inverting the scrotum by the finger and introducing it into the inguinal canal no evident rupture was felt, and the external abdominal ring was not large.

On Nov. 1st, 1909, an operation was performed with a view of curing an inguinal hernia; it was found, however, that no hernial sac was present, but there was a weakening of the abdominal wall external to the conjoined tendon, and a protrusion of a thick-walled sac, which on investigation proved to be the urinary bladder. The very thin fibres covering the protruding mass were divided in the direction of

the fibres—viz., parallel to Poupart's ligament, and the weakness remedied by stitching together the inner and stronger fibres of the external and internal oblique muscles to Poupart's ligament above the cord.

The second case was that of a man aged 33 years. The rupture was said to have been produced three weeks previously by straining. As in the previous case there was a swelling at the lower part of the inguinal canal only on coughing, but which immediately disappeared, and which was not present except during the act of coughing. The swelling was on the left side and was of about the size of a chestnut.

An operation was performed on Feb. 4th, 1910, but no hernial sac was found; it was noticed, however, that there was some bulging of the posterior wall of the inguinal canal, and on turning the cord outwards there was revealed an area external to the conjoined tendon and above Poupart's ligament, where the muscular support was entirely wanting, and through which protruded a thick-walled viscus, which proved to be the bladder. The repair of the wall was accomplished by stitching the conjoined tendon and internal oblique to Poupart's ligament beneath the cord, and the external oblique to Poupart's ligament above the cord as in the ordinary operation for radical cure of an inguinal hernia.

In both cases the bladder was uncovered by peritoneum.

I am indebted to Dr. W. B. De Jersey and to Mr. A. H. Brodribb for permission to publish these cases, which I hope may be of interest.

Bassett-road, W.

NOTES ON A CASE OF PAROXYSMAL TACHYCARDIA.

BY J. A. DRAKE, M.B. LOND., M.R.C.S. ENG.

THE patient was a healthy looking, well-developed male, aged 29 years. When I was called to see him he was complaining of "palpitation," slight difficulty in breathing, and moderate pain in the chest, behind and to the left of the upper part of the sternum. His appearance was normal except for very slight cyanosis, his respirations were somewhat embarrassed (24 per minute), and he had some difficulty in drawing a long breath. He said that he felt quite well except for slight difficulty in breathing and moderate disinclination for food. The pulse was very rapid (200 and more), regular, but small and perceptible only with difficulty. There were no cerebral symptoms, the extremities were warm, and the capillary circulation there quite normal. An examination of the chest showed the apex beat to be in its usual position internal to the nipple and visible as very rapid pulsation. There was no increase of cardiac dulness. The rate of the heart was about 200 beats per minute; there were no murmurs; the first and second sounds followed each other with no apparent interval, and had a somewhat flapping character. There were no signs in the lungs and the urine was normal. The symptoms persisted for nearly 24 hours and then suddenly stopped.

The first attack occurred when the patient was 14 or 15 years of age, coming on when he was sitting down at school. No reason could be assigned for the onset. Since then he has had on an average two attacks a year, more or less. The tachycardia is sometimes brought on by a sudden shock, such as slipping while walking; sometimes apparently it stops for the same reason. Usually, however, no reason can be given either for its onset or cessation. The patient says that before the attack ceases he becomes conscious of an increasing pain behind the sternum, and that soon afterwards the symptoms disappear, and the heart-rate suddenly returns to normal.

The duration of the present attack was by far the longest of any; he attributes this to the fact that he went to bed and stayed there instead of keeping about as is his usual custom. When seen on the following day he appeared perfectly well except for a furred tongue. The pulse was 80, strong, and regular. His only other illnesses have been malaria when abroad and appendicitis. He is not an excessive drinker or smoker. No other members of the family suffer from the same symptoms, neither is there any history of epilepsy or any neurosis.

Treatment in the present instance consisted of strong doses of sal volatile and spirit of chloroform slowly sipped, given with the idea of exciting a reflex action on the heart *viâ* the gastric nerves, and later painting the region of the vagus in the neck with the liquor iodi fortis. The attack stopped shortly after the latter treatment, so possibly it may have had some effect. A subsequent attack appears to have been cut short by the sipping of hot, strong coffee.

Tenby.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

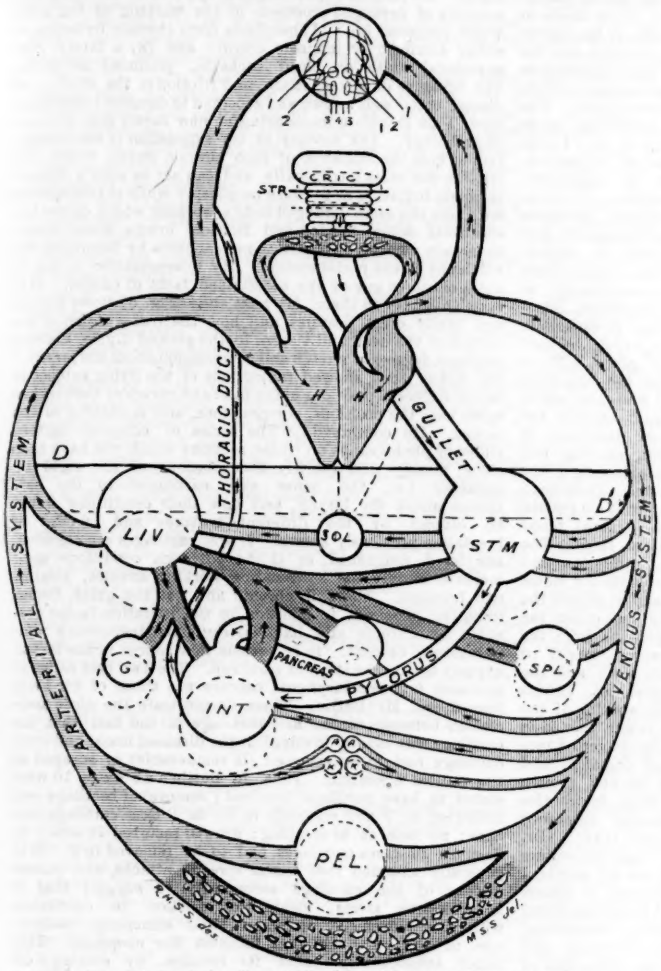
LARYNGOLOGICAL SECTION.

Epidiascope Demonstration, illustrating the Topographical Anatomy of the Rigid Resistances of the Larynx and Adjacent Parts.—Exhibition of Cases and Specimens.

A MEETING of this section was held on Dec. 2nd, Dr. P. WATSON WILLIAMS, the President, being in the chair.

Dr. R. H. SCANES SPICER gave an epidiascope demonstration of lantern slides illustrating the Topographical Anatomy of the Rigid Resistances of the Larynx and Adjacent Parts, bearing on the subject of the sites of initiation and maximum development of cancer of the larynx. A statement on the agenda paper ran as follows: "The object of this demonstration is to present some of the evidence available for the conclusion that the sites (*a*) of initiation, (*b*) of maximum development of laryngeal cancer are determined by the mechanical interaction of the rigid resistances of the laryngeal endo-skeleton on the one hand and certain cell constituents (e.g., epithelial and fibrous) of the soft tissues (e.g., mucous membranes) on the other. The larynx, from the ease with which it can be inspected, is peculiarly advantageous for the clinical study of the origin of internal cancer. It has the disadvantage that laryngeal cancer is comparatively rare. In both these respects a marked contrast appears between the larynx and the stomach. According to the American mortality returns, in every hundred cancer deaths 43 are stomach to 1 larynx, while in the English in every hundred cancer deaths 21 are stomach to 1·8 larynx (Roger Williams). In the seventieth annual report of the Registrar-General for England and Wales the total number of deaths from larynx cancer per year (seven years average) is only 313. Again, Sir Felix Semon's series of 246 cases took him over 30 years to collect at the rate of 8 per annum. As but few cases, then, are likely to be seen by any individual laryngologist at a sufficiently early stage to be watched throughout so as to test inductively the suggested causal relationship, it is the collective observation of many specialists directed to the point at issue that is required. This should soon confirm or disprove the alleged connexion. Deductive reasoning on the observations actually made will be, however, pre-eminently necessary since the real origin is but seldom on the *free* surface of the mucous membrane, as seen in the laryngoscope, but somewhere on its *deep* surface, and perhaps in a hidden laryngeal recess. If in an animal with an endo-skeleton—i.e., a vertebrate—certain muscular actions are, from any cause, habitually exaggerated, the corresponding rigid resistances and soft tissues are reciprocally influenced in such a way as to cause undue stress, strain, or friction of those soft tissues—i.e., to produce a chronic, intrinsic, mechanical irritation of the latter. The result is, under certain conditions of nutrition, warmth, moisture, senescence, obsolescence, &c., to stimulate an excessive and disorderly growth of the epithelial, endothelial, or connective-tissue cells entering into their structure. The association of local irritations of extrinsic and palpable origin, such as the pressure of a clay pipe, rough tooth-plate, smoking, paraffin soot, betel-chewing, Kangri stoves, and injury, with the starting of cancer is widely accepted. The 'sharp tooth' irritation cause of cancer forms a natural transition to the view now put forward that hitherto unsuspected intrinsic irritations are even more frequent and potent causes of the initiation of cancer, and this is not only in the larynx but throughout the body. The sites of preference for the commencement of cancer, whether in the gullet, stomach, intestinal flexures, rectum, breast, skin, uterus, &c., are found to be those sites at which the resultant of excessive mechanical forces chronically impinge or act, and where,

FIG. 1.



Schema to illustrate a theory of the determining cause of cancer in man.

FIG. 2.

Enlarged Detail.

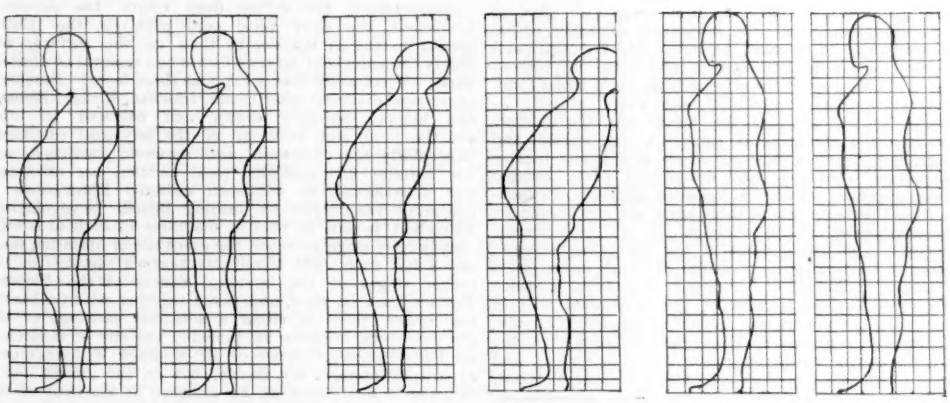
( ) = Cerebrum.
{ } = Cerebellum.
OO = Postural Centre
OO = Respiratory Centre.

1	=	Postural receptors.
2	=	Respiratory receptors.
3	=	Postural effectors.
4	=	Respiratory effectors.
CRIC	=	Cricoid.
STR	=	Sternum.
H	=	Heart.
LIV	=	Liver.
SOL	=	Abd. sympathetic.
STM	=	Stomach.
G	=	Gall-bladder.
P	=	Pancreas.
SPL	=	Spleen.
A	=	Adrenals
K	=	Kidneys
PEL	=	Pelvic area.
INT	=	Intestine.
D	=	Diaphragm.

Channels whose patency and efficiency are interfered with by abdominal respiration are indicated by arrows. Longitudinal lines show arterial, and transverse lines show venous, circulation, their decussation indicating the lymphatics. The portal circulation is shown reticulated.

D D. Position at end of thoracic inspiration.
D' D'. Position at end of abdominal inspiration.

FIG. 3.



Shows normal and faulty erect postures.

normally, there is no provision for escaping the consequences of such excess. This is seen if the springy joints, elastic lungs, and contractile muscles, which are little liable to primary cancer, are compared with such areas as the region of cricoid excursion, the œsophageal gastric junction and the rectum opposite the coccyx, where various rigid resistances and soft tissues undergo relative changes of stress and position with reference to each other with often excessive force. The chief muscular mechanisms concerned in producing undue tissue stress, strain, and friction are believed to be (1) the motor mechanism for maintaining equilibrium in posture, (2) that for respiration, and (3) that for digestion; but important factors arise in the relative displacements and mutual pressures of the internal moveable organs constrained in part by mesenteries and ligaments, and also from the artificial compression of the trunk by corsets. Faulty postures and mode of breathing in man, whether from habits, occupation, imitation, intestinal derangements, or other causes, bring about persistent portal congestion, intestinal stasis, and general autotoxæmia. This is especially seen in marked types of belly-breathing, in which *habitual inspiratory descent* of the diaphragm takes place, with *no* expansion of the base of the thorax by the muscular mechanism of respiration. Such abnormal muscular action of the diaphragm tends to produce, simultaneously but independently, two things: (1) abnormal increase of intrinsic mechanical strains and irritation, causing cell overgrowth at sites of impact or restraint—e.g., the inspiratory pulling down of the cricoid; and (2) through relatively lessened thoracic suction chronic portal congestion occurs, leading to intestinal autotoxæmia, general blood cachexia, and hence wasting of the tissues at large. The central nervous system, through the deep afferents and viscero-muscular reflexes, endeavours to coördinate the motor mechanisms so as to minimise undue strain and to adjust the deranged thoracic and abdominal functions, but under the influence of the chronic autotoxæmia, or perhaps from the emotional depression of sorrow, grief, or worry, sooner or later the higher coördinating centres strike work and the mechanical and portal derangements run further riot. In this way the biological syndrome of cancer in the working of the human machine is believed to arise. The power wasted in undue stress, strain, and friction appears to be converted into the energy of those unknown complicated chemical and physical constructive processes concerned in cell growth and multiplication—a marked contrast to those destructive results of similar forces on the material substance of a non-living machine in causing wear and tear." Dr. Scanes Spicer said: "Some may think I am premature in bringing this subject forward yet, but, at all events, I have not been precipitate. As evidence thereof, in debate and in the *British Medical Journal* in 1889,[1] I was upholding the rôle played by the movements of breathing, swallowing, speaking, and generally of injuries from irritation and pressure during functional movement in the production of disease in the larynx; while at intervals ever since I have persistently urged the need for physical training, for erect posture, breathing, thorough expansion of the chest, and special education for the re-acquirement of lost coördinations. My first slide (Fig. 1) is a schema or plan to indicate diagrammatically the centrifugal expansile action of the diaphragm in thoracic inspiration and the centripetal descending action of the same in abdominal inspiration. In Fig. 2 the top part of the schema is shown in larger form. Abdominal breathing produces with every breath: 1. Excessive pulling down of the thorax and the thoracic viscera generally, including the trachea, gullet, cricoid, and sternum, and therefore increased stress, strain, and friction of displaced, stretched, and compressed parts, causing persistent rhythmic mechanical irritation at points of attachment of soft parts, or where these latter are compressed by rigid resistances of the endo-skeleton. 2. (*a*) Displacement, compression, and derangement of the abdominal viscera; (*b*) lessened thoracic suction on the in-breath as compared with thoracic breathing; and (*c*) loss of the normal influence of the expiratory contraction of the abdominal wall in emptying the portal area and promoting the general circulation. Thus are produced simultaneously irritation about the larynx, throat, and gullet (and elsewhere as indicated), and likewise concurrently a blood cachexia. In general terms, I suggest that cancer is the manifestation of a specific biological conjunction, pathological syndrome, or symptom-complex of deranged processes in the working of the body, which processes are: (1) neoplasia from chronic irritation of either extrinsic or intrinsic origin; and (2) a faulty constitutional state or blood cachexia, produced as above. The influence of stress, strain, and friction in the etiology of disease is too well known and accepted to demand illustration here. I am therefore introducing no new factor into etiology or pathology. The novelty of my suggestion is the conception of how the influence of such chronic stress, strain, and friction can arise intrinsically, and can act as such a chronic intrinsic irritation as to cause neoplasia; while in conjunction with this the same deranged bodily working which causes the abnormal stress, strain, and friction brings about simultaneously a chronic constitutional cachexia by deranging the efficiency of the portal system. My interpretation is not in antagonism to any of the ascertained facts of cancer. It is supplementary to them. My next slide (Fig. 3) shows normal and faulty erect postures and how the transmission of the weight of the head and viscera to the ground differs, causing different degrees of stretch and compression about the larynx." Dr. Spicer then showed radiograms of the living subject in which different positions of the head and curves of the cervical spine vary the positions, compressions, and stretching of the larynx. He continued: "The series of coloured lantern slides of photographs of frozen sections which you have seen show clearly and quickly the relations of the rigid resistances—i.e., the bones and cartilages—to the soft tissues about the larynx, and how their conditions would be altered by the different postures and modes of breathing previously shown. If the cartilages are calcified, ankylosed, roughened, or thickened, such conditions must increase unduly the surrounding working stresses, strains, and frictions. These, if chronic and not too great, favour irritative neoplasia in addition to the irritation-factor provided by chronic and habitual exclusive inspiratory diaphragmatic descent. It is curious how cancer in the larynx appears to dog the steps of cartilage. The two best series of operated intrinsic laryngeal cancers are those of Sir Felix Semon and Mr. Butlin. These demonstrate the close association between cancer and cartilage in the fact that the cartilage was usually involved in the diseased mass, and such cartilage had to be removed (if removeable) or scraped at the radical operation. Thus, in Butlin's 13 cases 10 were stated to have cartilage involved; removal of cartilage was indicated in 7 and scraping in 2; in 1 case cartilage was bare: no note as to scraping: growth recurred *in situ*. In Semon's 10 cases cartilages had to be removed in 6. It is generally assumed that cancer spreads, attacks, and causes disease of the cartilage secondarily. I suggest that it is excessive stress, strain, or friction in connexion with the movement, resistance, and sometimes ossification of the cartilage that initiates the neoplasia. This latter subsequently takes its revenge by cutting off the blood-supply of its irritating tormentor. My theory affords a rational interpretation of the natural history of cancer of the larynx. It is in agreement with the age, sex, and site incidences, the left side predominance, the obscure commencement, the diffuse deep origin, the persistent hoarseness, the early vocal cord paralysis, the relative greater extent in the depths than on the surface, and finally the success of laryngo-fissure and removal of diseased parts. What other theory explains these facts? Numerous anatomical diagrams after Quain, Luschka, Killian, Elsberg, and others, especially drawn and coloured to bring out the form and relations of the laryngeal cartilages, particularly the cuneiform and sesamoid cartilages and the anterior and posterior vocal nodules, are exhibited, and a collection of published coloured illustrations of cancer of the larynx by leading British laryngologists. Though it is rare to publish diagrams of such at a sufficiently early stage to define the exact site of initiation there are a few such. Sir Morell Mackenzie's sketches of the earlier stages of the laryngeal cancer of the Emperor Frederick are on view, and, taken together with Gerhardt's description, point to either a sesamoid cartilage or the posterior vocal nodules as probably the site of initiation. Sir Felix Semon's diagram of Mr. Montagu Williams's case apparently opposes my theory, but on the growth being removed it was found to be attached at the back of the laryngeal ventricle about which the arytenoid plays in

[1] Brit. Med. Jour., Sept. 14th, 1889, p. 592.

functioning. At a later stage the relation of the bulk of a laryngeal cancer clustered over a subjacent cartilage is usually apparent and I show many instances."

Mr. HERBERT TILLEY showed an instrument which he had found useful in the Removal of the Nasal Spines in the operation of submucous resection of the septum.

Dr. H. J. DAVIS exhibited: 1. A case of Leprosy being treated with subcutaneous injections of Nastin B. 2. A Thyro-lingual Cyst and a patient who had recovered from Acute Sphenoidal Sinusitis after operation. 3. A boy, aged 7 years, who had suffered from Empyema of the Maxillary Antrum, thought by some members to be due to osteomyelitis of the upper jaw.

Mr. CHARLES A. PARKER showed an interesting Tonsillolith of very large size, successfully removed by traction with forceps.

Dr. ADOLPH BRONNER exhibited a Pedunculated Fibroma of Posterior Pillar of the Fauces.

Dr. W. H. KELSON showed a case of Lupus of the Larynx in a woman aged 36 years; treatment by cautery had been only partially successful, and Dr. Kelson proposed to try tuberculin and show the case again later.

Mr. J. GAY FRENCH showed a case of Stricture of the Lower End of the Œsophagus which he considered spasmodic. Some other members, however, were inclined to deny the existence of spasmodic stricture at all.

Mr. SOMERVILLE HASTINGS showed a case of early Myasthenia Gravis with laryngeal symptoms. The patient was unable to whistle or to close his eyes, but was improving.

Dr. E. A. PETERS exhibited cases showing very good results in which Singer's Nodules had been removed from the cords by means of the galvano-cautery.

Mr. CYRIL A. B. HORSFORD showed a case of Laryngeal Tuberculosis, apparently cured by amputation of the epiglottis and application of pure carbolic acid.

Dr. G. WILLIAM HILL exhibited a case of Carcinoma of the Œsophagus, in which very great improvement—? temporary cure—has been obtained by radium treatment. Also other cases of malignant disease.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases.

A MEETING of this society was held in the Royal Infirmary, Edinburgh, on Dec. 14th, Dr. BYROM BRAMWELL, the President, being in the chair.

Dr. DAWSON TURNER exhibited: 1. A boy, aged 5 years, suffering from a Pigmented Nævus with Hairs of the Left Ocular Region. It had been visible at birth but had been growing. It measured 5 centimetres each way and was brownish-black in colour. It had been treated by the application of 13 milligrammes of radium for 10 hours (130 mg. hours) with great improvement. In places the colour had been washed completely away. As this method destroyed the hair follicles it was not a suitable means of treating angiomata of the scalp. 2. A woman, aged 25 years, who had a port-wine stain of congenital origin on the right cheek, temple, and neck. It measured 2 by 1½ inches and had been treated with weak preparations of radium since January. Dr. Turner thought that strong preparations of radium were likely to produce permanent atrophy. It was a painless form of treatment.

Dr. F. GARDINER showed a case of Pityriasis Rubra Pilaris in a young boy. The eruption affected the face, arms, and legs on their exterior aspects and closely resembled psoriasis. The eruption had come on only three weeks ago after he had been playing football. This disease was thought to be a tuberculide, and in this case von Pirquet's reaction was slightly positive. Arsenic was usually contra-indicated in such cases, but in the present one great improvement had followed its use, while 2½ per cent. salicylic acid vaseline had been applied externally.

Dr. J. V. PATERSON showed: 1. A man, aged 48 years, suffering from Dystrophia Epithelialis Corneæ (Fuchs). He first had noticed a visual defect eight years ago. On the left cornea, rather below its centre, a patch of epithelium, roughened and œdematous or actually raised into small vesicles, was seen, and in the right cornea a similar but less marked appearance was noted. The sensibility of the corneæ was much impaired; the tension of the eyes was normal. The etiology was unknown. 2. A case of very advanced Arterio-sclerotic Changes in the Retinal Vessels of the Left Eye. The disease was extraordinarily pronounced, and the lower retinal arteries showed as silvery branching lines (silver wire vessels) empty of blood; a large area of the retina was thus rendered bloodless. Many small hæmorhages were scattered over the fundus.

Dr. EDWIN BRAMWELL showed a young man with Brown-Séquard's Paralysis due to a bullet wound. In the middle of August he was behind a hayrick at which his brother was firing with a Lee-Enfield rifle 90 yards distant. He felt a peculiar sensation in the back of his neck, with tingling down the back, but no pain; he then fell down, and was completely paralysed in all four extremities. In this condition he remained for some days, but then the left arm and leg began to improve. At present there was atrophic motor paralysis of the right triceps, hand muscles and extensors, and flexors of the fingers. The oculo-maxillary syndrome was present on the right side; there was paresis of the right leg, with ankle and knee clonus and Babinski's sign. There was loss of temperature and pain sensation on the left side below the fourth rib, with defect of sense of position and bone conduction of the right side. There had been a unilateral lesion of the spinal cord. The entrance wound was situated one inch to the right of the middle line at the level of the seventh cervical spine, and the exit wound at the level of the cricoid cartilage. The lesion affected the seventh and eighth cervical segments and the first dorsal on the right side, both motor and sensory nerves being affected.

Dr. NORMAN WALKER exhibited: 1. A case of Actinomycosis of the Neck and Lower Jaw in a man, aged 31 years, who worked among cattle and often chewed straw. The ray fungus was found at the first examination on Sept. 26th, but it had never been found since. The patient had been treated with potassium iodide, and this drug seemed to have destroyed the fungus. Great improvement had been noted since the man had received two doses of actinomycosis vaccine. 2. A vanman, aged 30 years, suffering from Multiple Sarcoma of the Skin. The disease was first noted eight weeks ago with a vague form of illness; then an attack of rheumatism was followed by one of pleurisy. The earliest lesion appeared on the face, and when the patient was first seen on Nov. 10th there were extensive lesions on the scalp, face, trunk, and limbs. The glands behind the sterno-mastoid and the epitrochlear glands were enlarged and hard. Nodules were present all over the forearms, and hæmorrhages were observed in parts of these; the blood appeared normal. These nodules were observed to have increased in size and number within one week. Under the action of potassium iodide the lesions had improved greatly on the arms, but the tumours on the back were increasing in size.

Dr. G. A. GIBSON showed: 1. Partial Acromegaly in a man aged 32 years. There was evidence of excessive growth of the cranial bones with enlargement of the sinuses, as well as of the facial bones; there was, however, no appearance of hypertrophy elsewhere. 2. A girl, aged 4 years, with a Patent Arterial Duct. She had been observed to become breathless on playing, but was otherwise in perfect health with no cyanosis. There was the pathognomonic thrill and murmur, which began in the middle of the ventricular systole and continued beyond the second sound, which latter was sometimes doubled. Such cases were by no means rare, and in Dr. Gibson's ward at the present time there was a young woman, aged 29 years, with a similar affection.

Professor Sir THOMAS R. FRASER showed cases of Beriberi illustrating the œdematous and the atrophic varieties. The œdematous variety showed the beneficial results of treatment and the atrophic variety the signs and symptoms of peripheral neuritis. The cases occurred in coolies from a ship which traded from Hong-Kong, &c., and this country. Eight Chinamen on board became affected, but none of the white people. On admission cases of the first variety were entirely bloated, the face, hands, feet, and abdomen being greatly distended with fluid. They soon began to improve, and at first passed 180–120 ounces of urine per diem until the fluid was entirely drained away from them. A remarkable fact was the very great distension of the heart, which underwent rapid contraction on the patients being put to bed. In the case of the atrophic variety, certain areas on the lower extremities were painful on pressure, and in these the deep

reflexes had gone; one case showed foot-drop with motor paralysis.

The PRESIDENT showed: 1. A case of Obscure Nervous Disease. It occurred in a dock labourer aged 29 years. Since the age of seven he had had a fœtid discharge from the ear, but he remained well in health until the age of 21, when he gradually developed difficulty in moving the right arm, right leg, left arm, left leg, facial muscles, and tongue, and had had three attacks of difficulty in swallowing. His family history was good. The present condition was that he was a big, robust-looking, tall man, unable to stand or walk, with a vacant expression; mentally he was bright, but unable to speak on account of spasm of the muscles of articulation; his palate was high; the tongue was very large and the point was always turned upwards. Scoliosis was present, and any voluntary movements were attended with spasmodic muscular contractions which passed off on attempting further movements. The muscles reacted briskly to faradism and galvanism, the contractions were not persistent and there was no polar change; the deep reflexes were absent; plantar flexion was present and the organic reflexes were unimpaired. The cerebro-spinal fluid was normal and the sensory functions were normal also. On shutting the eyes there was spasmodic contraction of the muscles which prevented him from opening them for some time. 2. A case of Myxœdema with Ascites. A cure followed tapping and the administration of thyroid extract. The disease occurred in a woman, aged 50 years, who had had typical myxœdema of six years' duration and which followed severe "floodings." Thyroid treatment caused great improvement, and she remained well for three years. With an attack of influenza this treatment was suspended, when the myxœdema redeveloped. On admission she weighed 15 stones 4 pounds, and the abdominal measurement was 48½ inches. Thyroid treatment was commenced and the abdomen was tapped, 400 ounces of yellowish-green fluid being withdrawn. The fluid has not reaccumulated, and the weight has been reduced to 10 stones 11½ pounds, with complete disappearance of the myxœdematous condition.

Professor F. M. CAIRD showed: 1. A Partial Gastrectomy for Carcinoma of the Stomach in a man aged 28 years. A year previously he had suffered from pain in the stomach with vomiting after eating, but medicines relieved him for some months. On recurrence he was admitted to the medical ward and treated for gastric affection. The free HCl was abundant. On operation a malignant degeneration of a peptic ulcer was found adherent to the pancreas. The diseased area was removed and found to be a columnar-celled carcinoma. The patient was now well. 2. A male, aged 55 years, after removal of half of the stomach, a portion of the liver, and 7 inches of the transverse colon for a Large Carcinoma of the Body of the Stomach. On admission a swelling of the size of a cocoanut was seen in the epigastrium. The operation lasted two and a half hours and the patient was transfused while on the table. He had made a good recovery.

Professor H. ALEXIS THOMSON showed: 1. A patient after removal of Impacted Stone from the lower end of each ureter. The patient, a man, aged 29 years, a miner, had had symptoms pointing to renal and ureteral stone for four years. The X rays showed two small shadows placed symmetrically at the level of the floor of the bladder. The stones were removed by the vesical route. 2. A boy, aged 12 years, previously shown to the society, who had had a Periosteal Sarcoma of the Right Humerus removed. Musculo-spiral paralysis supervened, but had been recovered from. The lower half of the humerus became the seat of further new growth, and was resected on Sept. 6th, a portion of the right fibula being inserted in its place. The first operation had been performed more than a year ago, and the case was encouraging, as all the other cases of a like nature which Professor Thomson had operated on had died within a year. He thought this method of resection was quite as satisfactory as amputation.

Mr. DAVID WALLACE showed: 1. A patient after Nephrectomy. The woman, aged 30 years, had been operated on on June 28th for acute suppurating appendicitis. In August she suffered from pain in the right lumbar region. No urinary symptoms developed until September, when she had rigors, and the urine became alkaline with much pus. On Oct. 19th cystoscopy showed a healthy bladder. A perinephric abscess was detected on Nov. 4th, and pointed in the ninth intercostal space; this was opened and showed Gram negative bacilli. On Nov. 29th nephrectomy was performed. 2. A woman, aged 36 years, who had complained of Difficulty in Swallowing for three months subsequent to some trouble with a fish-bone in her throat. Œsophagoscopy showed an annular stricture at the upper end of the œsophagus, and a portion removed and examined microscopically revealed squamous epithelioma. The operation consisted in making an incision along the anterior border of the left sterno-mastoid and excising the tumour. The upper end of the œsophagus was fixed to muscles and skin, and an œsophageal tube was introduced. There were no enlarged glands.

Mr. H. J. STILES showed: 1. A boy, aged 10 years, six months after operation for Congenital Hydronephrosis. He had had a fall four weeks before admission, and this was thought to have caused his symptoms. The abdomen had, however, been unduly large since birth. On admission the left iliac fossa was alone tympanitic; the urine contained a little albumin and red blood corpuscles. The cyst occupied the greater part of the abdomen, the apex beat being pushed up to the third left interspace. The cyst was excised extraperitoneally after having been tapped and 7½ pints of dark brown liquid with a urinous odour having been drawn off. The pedicle was very broad, and numerous large veins were present. The operation was done from the lumbar region, but Mr. Stiles found that the transperitoneal route was the most easy. 2. A patient, six weeks after Nephrectomy for Acute Infection of a Hydronephrotic Kidney. Three days before admission the man was suddenly seized with abdominal pain at the site of a former operation for appendectomy done 18 months previously. The abdomen was somewhat distended and tense, and the patient was admitted as a case of acute obstruction. The operation revealed no obstruction or adhesions, but an acutely inflamed hydronephrotic kidney which contained 10 to 12 ounces of sero-purulent fluid.

Mr. GEORGE L. CHIENE showed a patient after operation for Ruptured Ectopic Ovarian Gestation. She had complained of pain on the right side for three days previous to operation, but was suddenly seized with pain and collapse. She was sent to hospital as a probable case of acute appendicitis, but on examination the real cause was diagnosed. The menstrual history was misleading, as she had been absolutely regular, and expected her menstrual period within three days. The abdomen was full of fluid blood and clots, and the right ovary was ruptured, showing it to have been a true case of ovarian gestation.

Mr. J. W. STRUTHERS showed: 1. A case after Nephrectomy for Essential Hæmaturia. A woman, aged 35 years, with history of hæmaturia for two years, variable in amount but never completely absent. She was found to be bleeding from the left kidney only. This organ was exposed, slit open, but nothing was found. It was stitched up with through-and-through catgut sutures, and there has been a gradual cessation of hæmorrhage. 2. A lad after operation for Acute Obstruction due to a band, and also to tuberculosis of the termination of the ileum. The band was divided and a lateral anastomosis established between the ileum above the disease and the ascending colon, the diseased gut not being resected. The patient was now apparently well.

Mr. HENRY WADE showed: 1. A boy, aged 4½ years, three months after excision of the diaphysis of the ulna for Acute Infective Osteomyelitis. The operation was done 21 days after the onset of the disease, and primary union took place with complete osseous regeneration, massage and movement having been employed. 2. A boy, aged 4 years, one month after Nephropexy for Moveable Kidney. The child had gained a stone in weight and his intelligence had greatly improved.

Mr. D. P. D. WILKIE showed: 1. A male, aged 19 years, after operation for Perforated Duodenal Ulcer. He was very collapsed, and intravenous transfusion was done twice with no benefit. Oxygen gas was then led into the pouch of Douglas and allowed to bubble through the sero-pus there. Within three-quarters of an hour there was great improvement and the pulse became full and bounding. Oxygen was rapidly absorbed from the peritoneum and produced active intestinal peristalsis with well-marked leucocytosis. 2. A male, aged 36 years, after Implantation of the Omentum in the Abdominal Wall for Hepatic Cirrhosis with Ascites.

Mr. E. W. SCOTT CARMICHAEL exhibited: 1. A girl, aged 9 years, after operation for Tuberculous Disease of the Shaft of the Ulna and Tibia. Subperiosteal resection of the

diaphysis of both bones was done after Mr. Stiles's method. X ray photographs taken at two months' intervals showed the gradual growth of new diaphyses. 2. He demonstrated Oehsner's method of treating potential and acquired flat-foot by the application of oxide of zinc plaster strips.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Mr. W. Morley Willis, the President, being in the chair.—In opening a discussion on the Mortality of Appendicitis and How it can be Reduced, Mr. A. R. Anderson mentioned that during the last ten years there had been 973 operations for appendicitis performed at the Nottingham General Hospital with 89 deaths; of these 89 fatal cases in only one had pus been absent at the operation. While the number of operations at the hospital had yearly increased, the mortality had shown a yearly decrease. During the last 11 months there had been 138 operations with only seven deaths. This showed that the disease was now earlier recognised and the cases were sent up earlier for operation, with a corresponding increase in the safety of the operation. Ten years ago the routine treatment was first of all medical, and the surgeon was only called in to severe cases. Mr. Anderson then described what actually happens during an acute attack of appendicitis. Within 12 hours of the attack he had found the appendix crimson in colour and rigid and filled with mucopurulent fluid; a few hours later black and then greyish spots appeared in the wall of the organ, lymph became deposited on the neighbouring coils of intestines, and perforation might take place at any moment. The rapidity with which the symptoms might pass from bad to worse was amazing. Most operators had found pus present within 24 hours of the commencement of an attack. Defective drainage of the appendix, leading to stagnation of the contents and increase of the virulence of the organisms, was responsible for this rapid change of symptoms. The diagnosis might be confused with perforation of the intestinal canal elsewhere, but as a rule it was easy. Early operation, in his opinion, was the best and safest method of treatment. In cases, where from delay or otherwise an abscess had formed, the best treatment was to protect the peritoneal cavity with gauze and to empty the abscess and to find and remove the appendix. This latter point was still *sub judice*, but Mr. Anderson considered that it was wiser to remove the organ, as it had been known to lead to subsequent trouble if left. Septic general peritonitis accounted for 75 per cent. of the deaths from appendicitis. In these cases drains should be inserted in several positions and the patient kept propped up in bed and continous saline infusion administered. But the patients should not arrive at this serious condition, because they should be operated upon in the acute and early catarrhal stages. If this was done the mortality would immediately decrease.—Mr. R. G. Hogarth said that 80 per cent. of all cases of appendicitis, no matter what complications should arise, recover without operation. To reduce the mortality, the diagnosis and technique of the operation should be improved. He himself had mistaken for appendicitis cases of acute suppuration of the gall-bladder, parametritis, and tubal trouble in the left side. In children, too, the diagnosis was often difficult. Morphia was to be avoided and the pulse carefully watched. The "quiet interval," due to perforation of the appendix, was very dangerous, as it led to a feeling of false security.—Dr. C. H. Cattle said that many patients had safely got through three or four attacks of appendicitis. Where these attacks became so frequent as to incapacitate the patient, he advised operation. One never knew when a mild case would become serious, and therefore he advised operation if the symptoms did not improve after 24 hours.—Mr. K. Black advised operation where the symptoms persisted after 48 hours. Operations were free from mortality in the early cases; but it was so difficult for the surgeon to get hold of these cases. He had had the opportunity of watching 400 operations for acute appendicitis performed by various eminent surgeons at four large hospitals; and he observed that the mortality varied greatly with different surgeons. If the operation was properly performed in the early cases the mortality should be *nil*.—Dr. W. T. Rowe related a case of perforative appendicitis where the pulse did not rise above 72 per minute, but during the convalescence of the patient it was found that the normal pulse-rate was 56.—Mr. A. R. Tweedie did not advocate the removal of the appendix in cases of peri-appendicular abscess.—Mr. T. B. Gilbart-Smith gave morphia in those cases where the pain was acute and the signs were not clear.—The President recommended immediate and early operation where possible. In localised abscesses of several days' duration he preferred simply to drain the cavity and to leave the appendix alone. It was impossible to foretell whether a case would run a mild course or not, and he advised operation, leaving the responsibility of a refusal with the friends. In doubtful cases tenderness and rigidity were most important diagnostic signs.

OXFORD MEDICAL SOCIETY.—A meeting of this society was held in the Radcliffe Infirmary on Dec. 9th, Mr. R. H. A. Whitelocke, the President, being in the chair.—Mr. E. C. Bevers showed: 1. A woman, who for several years had suffered from a large Ventral Hernia, which had been cured by the implantation of a wire filigree. 2. A man, aged 60 years, whose large Irreducible Inguinal Hernia had been successfully treated by McGavin's double filigree operation. The method of inserting the filigrees in each case was demonstrated. Mr. Bevers advocated the use of a wire filigree in those cases of ventral hernia which were of large size and when the muscles had undergone such wide separation that to bring them together and overlap them would necessitate a severe operation, accompanied by shock and an undue increase in the intra-abdominal pressure. The final result in such cases without filigree was always doubtful. With a wire filigree a firm unyielding plaque was formed which could neither stretch nor bulge, and appeared to be the most rational method of closing a gap in the abdominal wall. In inguinal hernia the operation was indicated when the rings were large and the inguinal canal practically non-existent, due to atrophy of the muscles. The double filigree method would here give a good result, and, as McGavin stated, would bring all varieties of hernia within the reach of the surgeon.—Mr. A. P. Dodds-Parker showed a Tumour which he had removed from the abdomen of a woman. It consisted of a cyst the size of a large cocoanut firmly attached to the convex surface of the spleen. The spleen had to be removed with the tumour. Clinically the tumour had been freely moveable in the abdomen, but no certain diagnosis of its anatomical relations had been possible previous to the operation. The interior of the cyst contained a thickish jelly in which no evidence of its origin could be seen microscopically. Sections of the wall showed that it consisted of granulation tissue, and by none of the ordinary methods of examination was any evidence forthcoming that it was caused either by a parasite or by a bacterium.—Dr. A. S. GIBSON demonstrated a heart which showed Aortic, Mitral and Tricuspid Stenosis due to old-standing rheumatic lesions. The patient in the wards had shown the ordinary features of severe heart failure of the right side.

MANCHESTER MEDICAL SOCIETY.—A meeting of this society was held on Dec. 7th, Mr. E. Stanmore Bishop, the President, being in the chair.—Dr. C. P. Lapage read a paper on the Diagnosis and Treatment of Malnutrition in Infancy. The causes of malnutrition in infancy were enumerated and discussed, attention being called to general diseases not especially connected with the digestive system and to rarer conditions, such as mongolism and congenital heart disease. Tuberculosis, though not uncommon in infancy, must not be diagnosed without definite evidence, the von Pirquet skin reaction and the examination of the sputum being important. The treatment of the majority of the cases consisted of exact and scientific methods in infant feeding, the percentage method being most valuable if not carried to unnecessary elaboration. The value of lavage and gavage in suitable cases is very great, especially when there is a tendency to spasmodic contractions of the stomach. Infusion was another therapeutic measure which often had striking results, especially in those cases suffering from great loss of fluid. Tuberculosis and other general diseases should be suitably treated and the prognosis of tuberculosis in infancy was by no means hopeless.—Mr. A. A. Bradburne read a paper on the Early Diagnosis and Treatment of "Simple" Glaucoma. He laid emphasis on the importance of the disease and its early recognition. He discussed the effects of hypertension and described the symptoms which such gave rise to, pointing out that these two

combined to afford the most valuable evidence in the early stages. Mr. Bradburne referred to the difficulties associated with the treatment of these cases. He advocated a modification of the ordinary disfiguring operation of iridectomy in selected cases. The modification, he considered, lessened the reactionary leucocytic infiltration—which tended to block up the already inefficient excretory channels and ultimately to seal up the iridectomy wound; it also permitted early massage, the latter being necessary in that cases of "simple glaucoma" did not, as was the case with acute and chronic forms, possess the tendency to hypertension which would assist maintenance of the patency of the wound.

Reviews and Notices of Books.

A Manual of Operative Surgery. By Sir FREDERICK TREVES, Bart., G.C.V.O., C.B., LL.D., F.R.C.S. Eng., Sergeant Surgeon to H.M. the King, Surgeon-in-Ordinary to H.R.H. the Prince of Wales, Consulting Surgeon to the London Hospital; and JONATHAN HUTCHINSON, F.R.C.S. Eng., Surgeon to, and Lecturer of Surgery at, the London Hospital, formerly Examiner in Surgery, Royal Army Medical Department. Third edition. With new coloured plates and many new illustrations in the text. In two volumes. Vol. I., pp. 775; Vol. II., pp. 821. London: Cassell and Company, Limited. 1910. Price 36*s.* net.

THE chief characteristic of the earlier editions of Sir Frederick Treves's "Operative Surgery" was that the work was a faithful reflex of the personal opinions of its distinguished author, and an edition edited by another surgeon, must of necessity fail to preserve this special quality. But Mr. Jonathan Hutchinson occupies a position which fits him thoroughly for the revision of Sir Frederick Treves's work, for he also represents the teaching of the London Hospital, of which Sir Frederick Treves was an exponent. The second edition has been long out of print and we have before us now, not merely a reprint of the early issue with omissions supplied and redundancies removed, but what is to all intents and purposes a new book, retaining many of the virtues of the previous issues while conforming to modern progress.

The book commences with a chapter on general principles, in which is considered the condition of the patient as influencing the desirability of an operation. This is a matter which often does not receive the full attention it deserves. The attitude taken with regard to the costume of the operating surgeon is reasonable, inasmuch as there is not too much insistence upon unnecessary detail, while due regard is paid to asepsis. On the question of gloves the surgeon is the best judge of what should be done, and no general rule can be laid down as universally applicable. We find mentioned a fact which is too often forgotten—that at some important German clinics the use of rubber gloves has been abandoned in favour of cotton ones. The authors are a little sarcastic as to the great preparations made by some surgeons, and they tell us that they have heard of a surgeon who before driving to an operation always has his carriage wheels washed with ether and carbolic solution. The description of the operating theatre and its fittings is all that could be wished, and the account of the instruments contains numerous illustrations. In the description of ligature material and suture material we think attention should have been drawn to the fact that many surgeons never employ any other material than catgut for a ligature or suture that has not to be removed.

The importance nowadays of operations on the abdomen is shown by the fact that the surgery of the abdomen comes first and occupies practically the remainder of the first volume. A general description is given of abdominal section, and we find an account of the value of the Fowler position in cases of septic peritonitis, but we have been unable to discover any reference to the value of Murphy's method of irrigation of the rectum with saline solution. Great stress is laid on the counting of instruments, pads, and sponges used in abdominal operations; it is surely far safer not to put anything entirely within the abdominal cavity; every instrument placed within the abdomen can usually have attached to it tape or gauze which would remain outside the wound. Cases have been recorded in which foreign bodies have been left in the abdomen in spite of counting. We thoroughly agree with the authors when they say that the simplest and most efficacious measure in the treatment of flatulent distension is to turn the patient on one side for a time. Many surgeons do not seem to realise the great increase of comfort which a change of position gives to a patient after abdominal section, and we fail to see that any harm can accrue from it.

In speaking of the results of cholecystotomy, Kehr is quoted as having operated on 397 cases of gall-stone, and the source of the quotation is dated 1898. Kehr's operations are very much more numerous than that, for he has now got well beyond his thousandth case, and a more recent reference should have been given. Our opinion on the value of pyloroplasty fully agrees with that expressed in this volume, and that is that though the method is ingenious and theoretically should give a very definite enlargement of the opening, practically it fails. The authors tell us that for suture of the intestine Dupuytren's continuous suture takes less time than Lembert's and is equally efficacious, a view that will be generally taken. We are glad to see that in the account of inguinal colotomy the credit of introducing the operation into this country and of several improvements in the method of its performance is given to Mr. H. A. Reeves. A modified Bassini operation is recommended for the radical cure of inguinal hernia, and for the buried stitches kangaroo tendon is advised. We think that the authors have done well to include chapters on ovariotomy, hysterectomy, and ruptured perineum. We are glad to see that McGill receives the credit which is his due for devising the operation of suprapubic prostatectomy, and that to Freyer is rightly ascribed the advocacy of enucleation of the entire prostate in preference to any partial operation.

The second volume commences with the surgery of the head, and we may specially refer to a good description of the operation for removal of the Gasserian ganglion. It is surely unnecessary in a modern text-book of operative surgery even to mention the use of the ligature and of the écraseur in the removal of the tongue for malignant disease. We are indeed told, in the chapter on excision of the tongue, that these methods are now quite obsolete, but nowadays they do not even require mentioning. The operation recommended for removal of the tongue includes preliminary ligaturing of the lingual arteries and the dissection of the groups of lymphatic glands in the submaxillary region and those lying over the jugular vein; at the same time the tongue is removed. The division of the operation into two stages is considered to be unnecessary. The discussion on the choice of operation for removal of the tongue is extremely good. The surgery of the breast is well described, though perhaps a little briefly. The operations on vessels and amputations need no special comment. For disarticulation of the hip-joint the anterior racket incision is preferred, and the operations on bones and joints and on tendons conclude the work.

We are thoroughly impressed with the excellent character of the whole book. There are undoubtedly many points in which individual opinion would not coincide with the procedure advocated by the authors, but the views of the authors throughout the book are wise, temperate, and founded on great personal experience. It should be added that the coloured illustrations representing the anatomy

of various parts of the body are excellent. Most of these have been based on dissections in the Medical College of the London Hospital or at the Royal College of Surgeons of England, and we have never seen illustrations of this kind which surpass them.

Radio-Activity: A Brief Guide to its Use in General and Specialist Practice. By GUY STEPHEN, D.P.H. Lond.; Officier de Santé (France). London: Van Alexander and Co. 1910. Pp. 44. Price 1*s.*

THE author in his foreword states that he has merely endeavoured to compile a fair summary of what is at present known clinically and scientifically of a method of treatment still in the growing stage. It may be said at once that he has succeeded admirably in his object. The vast amount of literature dealing with radium-therapy already in existence—and by far the greater part of it is written in a foreign language—renders it difficult for a busy medical man seeking information on that subject to obtain precisely what he requires, save at the expenditure of much time and trouble. To such persons this little treatise may confidently appeal.

The author very wisely concerns himself but little with the chemistry and physics of radium; he formulates briefly and in the clearest possible manner the fundamental points which must be grasped by would-be workers with radium, and relies upon their supplementing this knowledge by reference to any of the large text-books on radio-activity should occasion arise. He describes the various forms of apparatus employed for the application of radium, and remarks that the use of radium salts loosely contained in a glass tube is now falling into abeyance, an opinion with which we are in complete accord, such a procedure being both unscientific and inaccurate and ill adapted to procure satisfactory results. For the measurement of the initial radio-activity he adopts the scale laid down by the French school, 1 centigramme of pure radium bromide evolving 2,000,000 units of radio-activity as compared with the 1 unit evolved by the same quantity of pure uranium oxide. He points out that in most instances when used therapeutically the pure radium salt is diluted in varying proportions with barium or some other inert element, and that thus by dilutions of 1 in 2, 1 in 4, or 1 in 10, initial radio-activities of 1,000,000, 500,000, or 200,000 are easily and correctly obtained.

In dealing with the radio-therapeutic principles he gives a short but sufficient account of the histological researches on radiumised tissues which have been carried out by Barcat and Dominici, and which showed that, speaking generally, the first effect of the radium rays was to cause stimulation of growth of the cells of normal tissues, but to produce a marked lessening of vitality of the neoplasic cells of tumours, which often proceeded to definite necrobiosis. This is the so-called "selective action" of radium as described by Wickham and Degrais. With increased dosage or prolonged application of radium the stimulative action of the rays on normal cells is converted into a destructive one; and it is mainly to the proper appreciation of these principles and the correct selection and combination of radium apparatus and filtering screens that all successful radium therapy is due. In dealing with the somewhat technical subject of filtration the author describes the differing powers of filtration possessed by sheets of aluminium and lead, varying from 4/100th millimetre to 2 millimetres in thickness, and points out that the thinnest of these suffices to cut off all alpha and most soft beta rays, whilst a screen of 5/10th millimetre of lead will stop all alpha and nearly all the beta rays, leaving only the "ultra penetrating" radiation of Dominici. With regard to radium reactions, he emphasises the fact that the application of radium is absolutely painless, even analgesic. We think he might have laid a little more stress upon the latter point, as in many instances, notably in malignant disease, the relief obtained by radium applications is wonderful. He shows that there is no hard-and-fast line between destructive and reconstructive action, but that the two processes shade insensibly into one another; and also gives a word of caution as to the relative susceptibility of various tissues, of which full note must be taken in determining the dosage to be employed. Turning to cases which offer the best hope of successful radio-therapy, he details those in which the most favourable results have been obtained, and which are for the most part definite lesions or chronic inflammations of the skin.

Referring to the very important and much discussed question of the treatment of malignant growths he is of opinion that the results vary chiefly in accordance with the depths of the tissue involved, and alludes to the difficulty of successfully dealing with epitheliomata of the mucous surfaces, which are invariably more resistant to treatment than those affecting a glabrous surface. We fully agree with his view that radium should not replace the surgeon's knife in the treatment of all operable cases of malignant disease, but should be used as an adjunct to it. It may often be advantageously employed before an operation to induce retrogressive changes in the growth, or after the operation to destroy possible small deep-seated and imperceptible foci.

The last chapter is devoted to a consideration of the therapeutic use of radio-active earths, mud-baths, &c. This mode of treatment has so far obtained no footing in the British Isles, but is greatly in vogue at some of the continental spas and in Paris. The technique is simple and harmless, and good results in the treatment of rheumatism and allied conditions are claimed for it, but much yet remains to be done before a positive pronouncement can be made thereon.

In conclusion, we congratulate the author on an interesting little treatise, which should be on the bookshelf of every practitioner who desires to acquaint himself with the present position and future possibilities of radium therapy.

Meteorology, Practical and Applied. By Sir JOHN W. MOORE, M.A., M.D.Dub., D.P.H., D.Sc. Oxon. (Honoris Causâ), F.R.C.P. Irel. Second revised and enlarged edition. London: Rebman, Limited. 1910. Pp. 492. Price 10*s.* 6*d.* net.

THE last 10 years have seen very great advances in meteorological science, arising partly out of the increasing scientific interest taken in the subject and partly from an increasing conviction of its importance in industry and in health. It is open to everybody to study meteorology, for it involves no elaborate machinery, no specially equipped laboratory, no complicated apparatus, and yet there are few who take advantage of these facts. A few people "tap the glass" occasionally, and make perhaps in addition a note of the variations of temperature, the only significance of which to them is the question of whether it is going to be a fine or wet day. The direction of the wind, the kind of cloud that hangs in the sky, the hygrometric indications, the electrical storm, are regarded as interesting natural phenomena, the meaning and significance of which, however, are rarely seriously studied. We may hope for better things, perhaps, when the subject is discussed more widely, and amongst the observers doing excellent work in this direction is Sir John Moore, the author of the interesting and attractive volume before us. No intelligent person will start reading a chapter in this book casually without going on seriously with it. The interest once started continues. Sir John Moore has been at great pains to make the second edition of his book "reflect to an adequate extent the advances which have been achieved." He has drawn freely on the works written by well-known authorities. He gives references to the

journals which contain the original account of researches in meteorology, and the result is an admirable and up-to-date collection of the world's work on the subject. It is an advantage that he has written from the point of view of the amateur observer, for his writing appeals to the reader who requires technical and scientific terms explained. His object has been to convey a clear idea of the science of meteorology to the person of ordinary intelligence and education, who for some reason or other has not previously had his attention attracted to the subject, in spite of the notorious willingness of all the inhabitants of this country to talk about the weather. Mainly Sir John Moore writes as a physician, but the application of the study of weather to questions of health he has reserved for the closing chapters. He starts with a brief introduction, partly historic and partly an emphasis of the importance of the subject, which is succeeded by an account of the methods employed in practical meteorology, the uses of the barometer, thermometer, hygrometer, anemometer, electroscope, kites, and so forth. Then follows an engaging section on climate and weather, and, lastly, in Part IV., three chapters on the influence of season and of weather on disease. The book is well and usefully illustrated and is full of the most interesting and entertaining material.

The Flora of Algeria. By ALFRED S. GUBB, M.D. Paris. London: Baillière, Tindall, and Cox. Price 5*s*.

BOTANY has ever been a favourite pastime with medical men provided with adequate leisure, and the exotic vegetation of Algeria is well calculated to stimulate into activity any latent taste of the kind. This comely volume is a photographic album of trees, plants, and flowers met with in that favoured clime, not necessarily indigenous to the soil but which have been acclimatised. The author is careful to disclaim any scientific pretensions for his work, and contents himself with giving a brief description of each plant in order to facilitate identification. Naturally, the first thing the visitor to Algeria asks is the name of the various vegetable eccentricities that attract his attention, and we can quite believe from personal experience that it is the exception to meet with trustworthy informants, the knowledge even of professional gardeners being limited in most instances to the score or so of flowers which they are accustomed to handle. On the whole, we may congratulate the author on the success of his photographic efforts, which are well produced on art paper. In any future edition, however, he would probably be well advised to amplify his descriptions, which, if anything, err on the side of brevity, and if he could see his way to give his readers a leaf index they would assuredly be grateful for its assistance in the pursuit of knowledge.

British Rainfall, 1909. By H. R. MILL, D.Sc. London: Edward Stanford. 1910. Pp. 120 + 308. Price 10*s*.

IN this, the forty-ninth annual volume, Dr. Mill gives an account of the organisation started by the late Mr. G. J. Symons, carried on by him until his death in 1900, and since then under Dr. Mill's own control. Nine other observers are now associated with him as trustees in the British Rainfall Organisation. The total number of complete records furnished during the year 1909 was 4681, an increase of 143 over 1908. Dr. Mill shares in Mr. Symons's strong belief that freedom from the conventional red-tape of official procedure is essential for the success of the undertaking; with this view, no doubt, very many scientific observers will agree. Mr. Gethin Jones contributes an article on the spot in England and Wales where snow lies latest; this is in a gully (not marked in the Ordnance maps) at an elevation of 3000 feet, lying 1200 yards N.N.E. of Carnedd Llewelyn in the Snowdon range, where snow lay until the end of June in the present year (1910), as shown in photographs reproduced in this volume. The outstanding feature in the rainfall for 1909 was the large number of hours' fall recorded in all parts of the country: at Camden-square the figure was the highest (576·5 hours), except in 1903, during 29 years. The average fall for England and Wales was 35·30 inches, being 4 per cent. above the average of 29 years; for Scotland it was 45·59 inches (4 per cent. below average); and for Ireland 38·13 inches (10 per cent. below average). The wettest place in England and Wales was The Stye, Cumberland (176·30 inches); in Scotland it was Loch Quoich (151·10 inches); and in Ireland, Killybegs, Donegal (78·71 inches). The least rainfall was registered at Fortrose, Ross (19·45 inches). The value of the labour of Dr. Mill and his coadjutors in British climatology can hardly be over-estimated, though we fear that it is quite true, as he says, that "at present the Local Government Board has no idea of the vast importance of the accumulated rainfall data at the service of the country."

LIBRARY TABLE.

Sanitary Law in Question and Answer. By CHARLES PORTER, M.D. Edin., Barrister-at-law. London: Longmans, Green and Co. 1910. Pp. 150. Price 3*s*. 6*d*.—In very small compass and without any padding Dr. Porter has provided the student of public health with all that he need know in regard to sanitary law at this present date. The various Public Health Acts are summarised and their provisions and intentions expressed in plain English; in the second part the principal allied Acts are similarly dealt with. The work is strictly up to date, last year's Housing and Town Planning Act being concisely but adequately described. The form of question and answer is not much in favour nowadays for a text-book, but for such a subject as sanitary law it appears to be quite suitable. This is a convenient manual, and the author's experience as medical officer for a metropolitan borough guarantees that the information is to be relied on.

First Aid to the Child. By D. HASTINGS YOUNG, M.B., M.S. London: G. Routledge and Sons, Limited. Pp. 317. Price 3*s*. 6*d*.—The object of this book is twofold: to teach mothers and nurses how to maintain the health of infants and young children, and also to serve as a "first aid" guide in the treatment of their diseases. The first section deals with the feeding of infants, the second with their diseases. The book is written in simple language, and though not of striking originality would be useful in cases where a medical attendant is not available. As in most books of the kind, the writer seems to have found it difficult to determine how much medical knowledge should be assumed in the reader and how much technical instruction should be given to persons presumably unacquainted with the groundwork of medical science. The instructions as to feeding are carefully given and the preparation of "humanised" milk is clearly described. The writer seems to have a prejudice against pasteurisation of cows' milk, which is barely mentioned; neither are dried milks noticed. Mumps is described as a disease of the mouth, and no precautions against infection are mentioned. Not everyone will agree with the statement that in connexion with post-nasal growths hearing is but rarely affected. Speaking of asthma it is rightly said that late suppers should be avoided; but such an injunction applies rather to adults. Diphtheria is said to be supposed to arise originally from defective drainage; no mention is made of milk as a vehicle for infection. Chorea is barely named, and not described, nor its importance in connexion with the rheumatic diathesis appreciated. The subjects of ringworm and parasites are also very lightly touched on. On the whole, although there is

useful information in the volume, it does not convey the idea of being the outcome of any large practical experience.

An Elementary Course of Food Testing. By B. A. BURRELL, F.I.C., Lecturer on Food and its Adulteration, Central School of Commerce, Leeds. London: Baillière, Tindall, and Cox. 1910. Pp. 92. Price 2*s.* 6*d.* net.—This is a very short and simple introduction to the chemical analysis and microscopic examination of some of the commoner food substances, compiled for the use of a class formed for the study of food and its adulterations. It is written simply, and makes no pretence to originality. Short and elementary as it is, there are some omissions that one is surprised to find. The origin of the metre is mentioned, but not the reason for adopting the weight of 1 cubic centimetre of water at 4° C. as the unit of weight. A few illustrations of starch grains, &c., are given, but very little use is made of the microscope. In a book published in 1910 we should expect to find the nitrogenous principles of food called proteins and not "albuminoids," this term having been practically abandoned by scientific chemists. Red litmus paper, again, is not the best indicator for alkalies, while turmeric is not mentioned.

Livingstone College Year Book, 1910. London: Livingstone College, Leyton, E. Pp. 128. Price 6*d.*—This account of excellent work in the medical training of missionaries records a slight falling off in the number of students at the college during the past year, which we trust is only temporary. An account is also given of the work in various parts of the world carried out by past students of the College, together with some notes on recent advances in tropical medicine. As to the value of the training afforded at the College there can be no question; those who pass through the course do not become "medical missionaries," nor do they assume to themselves the status of qualified medical practitioners. But they receive sufficient medical training and instruction in tropical hygiene to enable them to look after their own health, and to be of great use to the people with whom their lot is cast "in places where they themselves, or those about them, may sicken and die from curable diseases before the doctor could be summoned, even supposing he could leave his post and come."

BRITISH MEDICAL BENEVOLENT FUND

AT the November meeting of the committee 28 most distressing cases were considered and grants amounting to £300 made to 27 of the applicants. So few contributions have been received during the last few months that to do this it was necessary to draw upon, and indeed nearly exhaust, a small fund which has been carefully reserved for such an emergency. The committee therefore urgently appeals for help to enable them to deal with the numerous applications which are certain to be received at the next few meetings. Appended are particulars of the cases relieved:—

M.D. Lond., aged 43 years. After holding responsible resident posts in this country went abroad and worked up an excellent practice, but two years ago had an attack of hemiplegia and is now quite incapacitated. Two children, aged 10 and 9, at present being looked after by a relation. Has a small income, but it is insufficient for present unavoidable expenses. Voted £6.

Wife, aged 61 years, of L.F.P.S. Glasg., who is at present acting as ship's surgeon. Applicant lets lodgings, but in her husband's absence has unavoidably got a little behind with the rent. Voted £2.

Widow, aged 46 years, of M.R.C.S. Eng. Quite unprovided for at death of husband nearly 20 years ago, and finds great difficulty in supporting herself as a maternity nurse. Relieved four times, £46. Voted £12 conditionally.

Widow, aged 53 years, of L.R.C.P., L.R.C.S. Edin. Quite unprovided for at recent death of husband, and the small sum obtained for the death vacancy was swallowed up by debts. Endeavours to support herself by taking boarders, but at present has only one paying a small weekly sum. Voted £10.

Widow, aged 40 years, of M.D. Durh. Has been acting as a companion, but is temporarily in a state of health which necessitates a complete rest. Voted £12.

Widow, aged 62 years, of M.R.C.S. Dependent on an annuity of £10 and 5*s.* a week from an old age pension. Children unable to help. Voted £6.

L.R.C.P. Edin., aged 52 years. Used to have a fair practice in London, but for the last five or six years has been in very bad health and is now quite destitute. Hopes shortly to obtain a ship's surgeoncy. Voted £5.

Widow, aged 74 years, of M.D. Lond. Entirely dependent on two small annuities and requires help to obtain the small comforts necessitated by her age. Relieved five times, £31. Voted £5.

Daughter, aged 60 years, of late L.S.A. No income; tries to support herself by letting lodgings, but has been incapacitated for a few months as the result of an accident. Relieved twice, £24. Voted £12.

Wife, aged 65 years, of L.R.C.P. Was deserted seven years ago through no fault of her own, and is entirely dependent on this Fund and the Distressed Gentlefolks' Aid Association. Suffers from chronic bronchitis and is therefore unable to support herself. Relieved three times, £36. Voted £12.

L.R.C.P. Edin., aged 54 years. Has been quite incapacitated for several years by spastic paralysis and is dependent on an aged mother who can ill afford to help. Relieved six times, £72. Voted £12.

Widow, aged 53 years, of M.R.C.S., L.S.A. No income and health too feeble to permit of any regular work. No children. Relieved six times, £68. Voted £12.

Widow, aged 50 years, of L.S.A. No income and dependent on this Fund and a son earning only 17*s.* a week. Is blind in one eye and nearly so in the other. Health very feeble. Relieved six times, £70. Voted £18.

Daughters, aged 58 and 53 years, of late M.R.C.S. Endeavour to support themselves by needlework, but are in feeble health. Relieved six times. £74. Voted £20.

Daughters, aged 60 and 51 years, of late M.R.C.S. Live in a small house which they own and take boarders, but have had a very bad season. Relieved once, £10. Voted £18.

Daughter, aged 59 years, of late M.D. Lond. No income; lets lodgings. Relieved 27 times, £202. Voted £6.

L.R.C.P., L.R.C.S. Irel., aged 64 years. Was obliged to give up a practice in the North of London on account of ill-health, and is now quite incapacitated and without means; slight help from a sister-in-law. Relieved once, £18. Voted £18.

Widow, aged 62 years, of late M.R.C.S. Income £12 a year; children only able to give very slight help. Relieved once, £12. Voted £12.

Widow, aged 65 years, of M.R.C.S., L.R.C.P. Supported herself for some years as companion, &c., but is now only able to earn a few shillings a week by needlework. Relieved once, £12. Voted £12.

Widow, aged 65 years, of M.R.C.S., L.S.A. Supported herself for 24 years, but is now unable to obtain a suitable post. Relieved twice, £24. Voted £12.

Daughter, aged 58 years, of late L.R.C.P. No income; very deaf and otherwise unfit for any employment; dependent on a sister who has to earn her living. Relieved five times, £56. Voted £12.

Daughter, aged 63 years, of late M.R.C.S. Is not physically strong and gives her services as housekeeper in return for a home but receives no salary. Relieved twice, £24. Voted £12.

Daughters, aged 46 and 38 years, of L.S.A. Both physically incapable of earning a living; the elder has recently obtained a pension of £21 per annum; the younger is entirely dependent on her mother whose income is very small. Relieved six times, £72. Voted £6.

Widow, aged 69 years, of L.R.C.P. Edin. No income; children do not help; eyesight failing. Relieved three times, £36. Voted £12.

Widow, aged 61 years, of late M.R.C.S. Health very indifferent and only income 7*s.* a week, contributed by her sons. Relieved twelve times, £135. Voted £12.

Daughter, aged 56 years, of late L.S.A. Eyesight defective and chronic ill-health, which makes any continuous employment impossible; slight help from friends. Relieved nine times, £92. Voted £12.

Daughter, aged 52 years, of late L.R.C.P. Nursed both mother and father during illnesses which lasted many years, and is now without any means and unfitted to earn a livelihood. Relieved twice, £24. Voted £12.

Contributions may be sent to the Honorary Treasurer, Dr. Samuel West, 15, Wimpole-street, London, W.

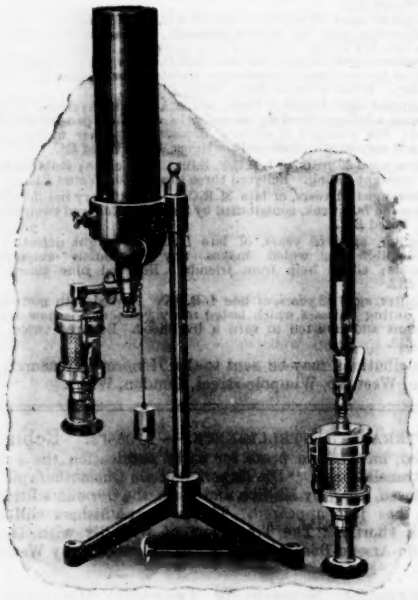
LITERARY INTELLIGENCE.—Messrs. Rebman, Limited, have in the press for early publication the authorised translation of "Die Experimentelle Chemotherapie der Spirillosen, &c.," by Ehrlich and Hata, the German edition of which has just appeared. The same publishers will also publish shortly "The Treatment of Syphilis with Dioxy-Diamido-Arseno-Benzol" (Ehrlich-Hata "606") by Wechselmann.

LIVERPOOL SCHOOL OF TROPICAL MEDICINE.—The following papers were read before the Royal Society on Dec. 8th by members of the staff of the Liverpool School of Tropical Medicine, viz.:—1. Some Enumerative Studies on Malarial Fever, by Major Ronald Ross, F.R.S., and David Thomson, M.B., Ch.B., D.P.H. 2. Experiments on the Treatment of Animals Infected with Trypanosomes by means of Atoxyl, Vaccines, Cold, X Rays, and Leucocytic Extract: Enumerative Methods employed, by Major Ronald Ross and J. G. Thomson, M.A., M.B., Ch.B. 3. The Life History of Trypanosoma Gambiense and Trypanosoma Rhodesiense as seen in Rats and Guinea-pigs, by H. B. Fantham, D.Sc., B.A. 4. Enumerative Studies on Trypanosoma Gambiense and Trypanosoma Rhodesiense in Rats, Guinea-pigs, and Rabbits, Periodic Variations Disclosed, by H. B. Fantham, D.Sc., B.A., and J. G. Thomson, M.B., Ch.B. 5. A Case of Sleeping Sickness studied by Precise Enumerative Methods: Further Observations, by Major Ronald Ross, F.R.S., and David Thomson, M.B., Ch.B., D.P.H. 6. On Hæmoglobin Metabolism in Malarial Fever, by G. C. E. Simpson, B.A., M.B., F.R.C.S.

New Inventions.

THE "PRANA" CARBON DIOXIDE SNOW APPARATUS.

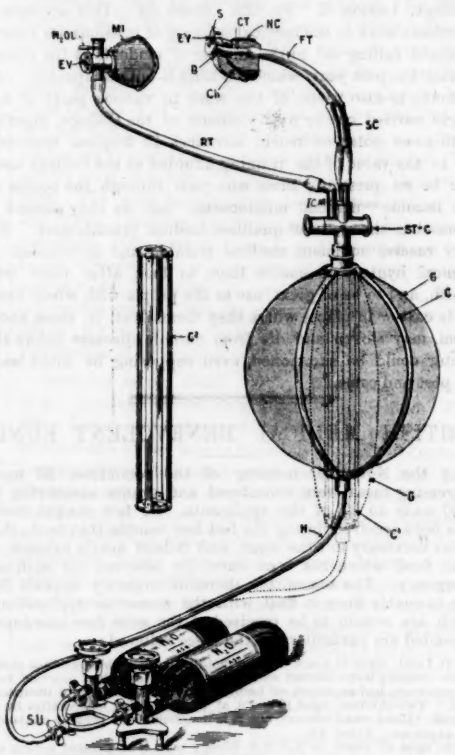
THIS apparatus is designed for producing the new freezing caustic CO_2, in the treatment of nævi, lupus, lupus erythematosus, lupus vulgaris, warts, moles, and so on. The method of treatment was described in a paper by Dr. Reginald Morton read before the Electro-Therapeutical Section of the Royal Society of Medicine on Nov. 19th, 1909, which was published in THE LANCET of Dec. 4th, 1909 (p. 1658). A subsequent paper by the same author appeared in THE LANCET of May 7th, 1910 (p. 1268). The "Prana" apparatus produces a convenient and effective pencil of carbonic acid snow with a minimum of trouble. It consists of a steel cylinder containing liquid CO_2 to which is attached a specially constructed metal box in which the CO_2 as it escapes condenses to snow. The snow obtained is ultimately compressed in a kind of stamp-mill or mould from which it emerges as a firm stick or pencil. The process is very simple and expeditious. In the accompanying illustration the apparatus on the left is for hospital use, and that on



the right is portable and convenient for general practice The temperature of the frozen gas is −79° C. A constantly cold solid of definite shape is obviously more convenient to use than a liquid refrigerant. The pencil of solid CO_2 enables, for example, as much pressure to be applied as is wanted, and thus freezes the tissues to any desired depth up to a reasonable limit. There is a gradual escape of gas from the pencil when it is applied, so that a fresh surface is constantly being presented. The action of the pencil is easily under control and can be readily localised, the extreme degree of the cold enabling its devitalising action to extend rapidly to the intended depth without risk of injuring deeper or adjacent parts. For shallow growths, it is said that an average period of 40 seconds suffices for the required depth of destruction, while deeper structures such as a thickly crusted wart require a longer application. Beyond a trifling smarting during the application, and some pain as the parts recover their normal temperature, there is no serious inconvenience to the patient. The apparatus marks a valuable and important development in dermatological practice. We are indebted to Aerators, Limited, of Upper Edmonton, London, N., for an inspection of the types illustrated above.

A NASAL INHALER FOR THE CONTINUOUS ADMINISTRATION OF NITROUS OXIDE.

SINCE the introduction in 1898 of the nasal method for administering nitrous oxide several forms of inhalers have been introduced and as many methods evolved in their employment. This would seem to indicate that no one form of inhaler is capable of satisfying the demands of every anæsthetist. The apparatus figured below allows the induction of anæsthesia by the two chief methods at present employed, and by a simple mechanism of throwing out of action certain valves the conditions favoured by other administrators can be obtained. The self-retention of the nasal inhaler, the absence of rubber pads, and a regulating



Combined mouth cover and inhaler.—MI, Mouth cover. N_2OL, Nitrous oxide lever. EV, Expiratory valve. RT, Rubber tubing. ICM, Inhaler connexion mount. Nose-piece, &c.—EV, Expiratory valve. B, Body. Ch, Channel. S, Shutter. CT, Conveying tubes. NC, Nose cap. FT, Flexible tubes. SC, Sliding clamp. ST-C, Stopcock. G, Gas-bag distended. G^1, Gas-bag empty. C, Gas-bag compressor distended. C^1, C^2 Gas-bag compressor at rest. H, Tubing to gas stand. SU, Single union connected to gas stand.

gas and air stopcock are, I think, features which will appea to all. The accompanying illustration shows the apparatus as fitted up.

I have intrusted its manufacture to Messrs. C. Ash, Sons, and Co., to whom I am indebted for many useful suggestions.

Harley-street, W. F. COLEMAN.

THE LANCET.

LONDON: SATURDAY, DECEMBER 24, 1910.

Pluralists in Medical Posts.

THERE was a time when it was quite common—in fact, so common that it would have been but little exaggeration to describe it as the rule—for several posts in the Church to be held by one man. The same incumbent was dean of one place, rector of another, and vicar of a third, and these three posts were held by him when other men, probably equally suitable for the work, were without any benefice. With duties so numerous, with posts often situated far apart, even in different counties or in different sections of the kingdom, it was physically impossible for the holder to discharge fully and completely the charges he had undertaken, but a few years ago both the theoretical and practical difficulties were ignored. So serious, however, at last did the practice of pluralism in the Church become that it was considered necessary to institute restrictive legislation, and now it is illegal for a Clerk in Holy Orders to hold several benefices unless they are small and situated within a short distance of each other. The subject of pluralism has of recent years become the subject of debate in the medical world. In a recent letter from our Vienna correspondent it was mentioned that the practice of holding several hospital appointments had been found in that city to act unfairly towards many of the junior members of the profession. Our correspondent wrote that it was not uncommon for a professor to hold the position of consultant in some special department at four or five different institutions, while many *privat docenten* were unable to obtain any post. It is certain that this difficulty is not confined to Vienna. In the British Isles it is quite usual to find one physician or one surgeon holding several distinct posts at different institutions, and in this way doing much to block the junior members of the profession in their advance, and last week we published the new rules dealing with this subject which have been recently considered and confirmed at a meeting of the subscribers to the General Infirmary at Leeds. These rules provide that in five years from Jan. 1st, 1910, pluralism will cease to exist among the members of the full honorary medical staff, who will be permitted only to hold the infirmary appointment. From the same date onwards the assistant medical staff will only be allowed to hold one other hospital appointment in addition to the infirmary appointment. The rules display very clearly the modern feeling towards pluralism in medical appointments, and are wise in their different treatment of the full and assistant staffs.

The same motive is not at work here as aforetime influenced the opposition to the pluralists in the Church. There the motive was frankly a fairer sharing of the pecuniary rewards derived from the several benefices. A large portion of the work of the pluralist was practically never done in person; for the most part it was entrusted to a junior member of the clerical profession at but a small percentage of the actual remuneration. In medicine the case is otherwise. The actual pecuniary benefit derived from the holding of any post is very small—in fact, in many cases it does not exist. There is no attempt made to transfer the work to a deputy; rather the holder of these many posts, rejoicing that he has so many, enjoys and performs the hard work which those posts entail. It cannot be denied that in many cases indirect benefit does accrue to the medical pluralist. The fulness of experience cannot fail to render his knowledge wider and more exact; some increase of reputation is also probable, and the increase in reputation will almost always result, when combined with the fulness of experience, in increase of practice. Still, the beneficial consequences are by no means certain, and we have known the energetic holder of multiple posts perform herculean tasks in conscientiously fulfilling numerous duties, and yet derive neither directly nor indirectly any pecuniary benefit therefrom. And it is not unusual to see the man whom over-strenuous effort has not rewarded in any way fall into a lifeless manner of discharging his too heavy responsibilities. We can well understand and sympathise with the desire to see as much as possible of the work in every branch of medicine; it betokens a zeal well suited for such a profession as medicine, but it may have consequences harmful to the zealot. When a man is in the first decade of professional life no amount of work appears to be too arduous, no hours seem too long for the furtherance of study, but as years go by the power to indulge in such feats diminishes. There is a natural unwillingness to resign work which was once a joy, and if such a resignation appears as a confession of advancing age it is obvious that the temptation to hold on to all becomes very strong. But it should be resisted. With all due justice to the conscientious pluralist, it is just possible that there may be a little hurry in his carrying out of the work, a little less care and attention being paid to it than would be paid if there had not been so much work to do. From this situation the rules which have been made recently with regard to pluralism at several of our large hospitals will serve to save a man in a dignified way.

We have spoken of the harm to the medical pluralist, but the harm to his younger brethren is just as important. At the present day the number of men who wish for hospital work is so large, that if several posts are held by one man many who may be just as intelligent, just as learned in that department of medicine, will fail to obtain any post at all. A post at some minor hospital, which may be of the slightest value to the man who has advanced far in his profession, may be of very great account in every way to his younger colleague. The boards of management of some of the more important hospitals already recognise that danger may attach to the holding of several hospital posts by the same man, and they reserve to themselves the right to require of men appointed to the medical staff of these hospitals that they should resign other posts if called upon to do so. Usually they look upon a post at a children's hospital

as not incompatible with due attention to the duties of staff officer to a general hospital, but as a rule they decline to allow a member of their staff to be also a member of the staff of another medical school, and they would certainly decline to allow any serious rearrangement of hospital hours so as to enable members of the staff to be elsewhere when they should be within the hospital walls Our own view is that not more than one post at each of two hospitals should be held by the same man. These posts should give him ample opportunity for hospital work. They would provide him with all the experience he may need, they will require from him all the energy which he can reasonably be expected to devote to hospital work, and he will not be depriving a younger colleague of an opportunity of obtaining due advancement. It would be difficult for the medical profession as a whole to take any part in laying down rules for the carrying out of this arrangement, and the discretion in the matter must remain with the governing bodies of hospitals. We have seen that in Vienna a useful change has been brought about by the hospitals themselves, and we feel sure the hospitals in this country are quite capable of dealing with the position.

The Extension of Hospital Care.

THE first annual report has been issued of a charity entitled the Cicely Northcote Trust, under a scheme initiated last year in consequence of the trustees of the fund named having offered to devote it to the establishment of social work in connexion with the in-patients of St. Thomas's Hospital. The step thus taken tentatively for the benefit of the inmates of a particular institution, and submitted to public appreciation by the issuing of a first report, deserves attention as such, and also on account of the possible developments which may attend upon its success in the future. It may, indeed, prove to be the beginning of an important movement of a kind which has already made its usefulness felt in the United States, but which has not hitherto been organised with us in any widely extended or systematic manner. If we explain briefly what are the objects of the Cicely Northcote Trust and the methods by which it is sought to attain them, it will be seen that the matter is one worthy of the attention of all who desire to see our hospitals working with full efficiency to alleviate suffering among the poor, and exercising a beneficent influence not limited to the treatment, surgical or medical, administered in their wards. A document such as the report before us is not addressed to the medical profession, but to that wider public who supply for the contests waged in our hospitals against physical incapacity and death the sinews of the war, and who if they ever enter the hospitals do so as sympathetic onlookers only. It reminds these, or any who may in imagination put themselves in the position of such sympathetic onlookers, that in many instances the suffering of the hospital patient stricken down by disease or by accidental injury is not confined to the sensation of physical pain, severe though that may be. Doubt, fear, and anxiety augment bodily suffering by mental torment. There may be distracting uncertainty as to the future and as to the present fate of those left at home destitute, to face the situation arising from the incapacity of the worker. There may be the knowledge that when all that the hospital can do has been accomplished it must be rendered ineffective by the poverty, misery, and ignorance into the midst of which the patient knows that he is returning. This, by the way, is a knowledge which must affect others than the patients themselves with a feeling that all the care bestowed, so far as any lasting good is concerned, will perhaps be altogether wasted.

For some years social work among the out-patients has been carried on, so far as means have allowed, at St. Thomas's Hospital, and the same is now being tried under the auspices of the Cicely Northcote Trust in the case of the in-patients and of phthisical and obstetric cases under treatment in the out-patient department. In the case of the last the demand upon the resources of the Samaritan Fund has been too heavy to be met, and it was not considered that they were the patients for whose benefit it was intended. When the scope and objects of the proposed new work came to be considered it was felt that the best policy was to draw up an extensive programme and to start operations in a small way under all the headings included in it, allowing circumstances and increasing knowledge and experience to modify or augment the efforts made in any particular direction. It was resolved as a general plan, therefore, (1) to carry out a system of social service in connexion with the wards, including the assistance of in-patients and their families, but not the granting of surgical instruments or convalescent treatment already undertaken by the Samaritan Fund; (2) to undertake the care of all phthisical out-patients and to supervise their homes; and (3) to provide for the assistance of out-patients attending the obstetric department. In practice the endeavour is made to encourage thrift and independence, and to subsidise the efforts of those honestly endeavouring to help themselves, and to enable, as far as possible, the instructions of physicians and surgeons to be carried out. Aid is thus given to persons who have not hitherto come under the Poor-law, those already in receipt of parish relief being left to the care of the guardians. As can readily be supposed, the work attempted in a first, and consequently experimental, year, subject to the limitations of a restricted income, has not been extended throughout a large hospital. In certain wards where the trial has been made a "Northcote worker" has visited patients at regular days and hours in order to ascertain such details of their home lives and needs as they might be ready to impart. This has been done in combination with the ward sisters, and so far as the Northcote worker is concerned it is confined to the precincts of the hospital itself. Outside, where help appears to be wanted, the aid of the clergy, of the Invalid Children's Aid Association, of the Charity Organisation Society, and of similar institutions as well as that of sympathetic individual volunteers, is invoked, the home is visited, and its conditions are thoroughly inquired into, after which assistance is given or withheld in accordance with the needs of the case. These, of course,

vary widely both in nature and in the extent to which pecuniary or personal influences may be required for their alleviation. A little tactful persuasion may have to be applied in order that a workman's situation may be kept open for him until his recovery; a home may have to be visited in order to see that the children are being cared for during their mother's absence; material aid, instruction, and supervision may be wanted in order that a phthisical patient may carry out at home advice which the physician can give but cannot enforce. In a large number of obstetrical cases, besides such help and counsel as may be needed in order that the physical welfare of the patient may be protected, there is obviously an opportunity for the sympathetic adviser and friend almost unlimited in its extent and in the variety of its demands upon the helper's resources. It is only necessary, however, to indicate the nature of the work in order to point out that its extension must depend upon the number and zeal of those who are willing to assist and upon the resources which the generosity of the charitable may place at their disposal. It is not a question of regulating the almsgiving of a benevolent institution, and of increasing its power to bestow money upon the poor, but of distributing in the most practical way help which may take the form of money or of money's worth, but which may in other instances be equally effective for good without the expenditure of a shilling. It is the holding out of a helping hand which will be grasped gratefully for the sympathy and aid that it brings—a hand which will supplement and render complete the work of the hospital, but which the hospital cannot extend because its energies, and the funds which sustain them, have to be devoted to definite purposes of a particular and limited nature.

We observe that in a note preceding the Lady Almoner's report of the work of the Cicely Northcote Trust it is said that: "The work is increasing so rapidly now that if it is to progress, as it is hoped it may, it will be necessary to obtain a much larger income to meet the heavy working expenses and to engage further skilled and trained assistance. It is hoped that after the publication of this first annual report the work may be increased by donations and annual subscriptions being sent to the honorary secretary." We echo that hope in giving publicity to it, and shall watch with interest the progress of the trust named and the development of the effort which it represents to alleviate a form of misfortune which evokes our warm sympathy. Our hospitals open their doors to the poor when stricken down by disease or by injury, and, so far as it lies in their power, minimise by medical and surgical treatment the weight of the blow which disease or injury inflicts upon those whose health, and consequent ability to earn a living by their daily toil, are often their only assets. It is not possible for hospitals to carry the work further than the healing of the physical disability, but they may well become the source and centre of charitable endeavour to avert the otherwise inevitable consequences of incapacity from falling upon the patient and his or her dependents. They should thus be able to inspire and guide the operations of voluntary lay workers in the cause of charity, thereby strengthening and widening their own influence to the advantage of the community.

Prison Reform and Common Sense.

IN recent discussions regarding the treatment of the criminal a great deal has been heard about the shortcomings of our penal methods, which, if we are to believe some critics, are the product of a quite ingenious combination of cruelty and ineptitude. Much of this criticism emanates, of course, from persons who have very little direct knowledge of the details of the system on which they so confidently pass judgment, and little, if any, real acquaintance with the factors of the problem which this system has to meet; and, indeed, the very exaggeration of their censure is sufficiently suggestive of this fact to breed suspicion in the judicial mind. That type of mind, however, is hardly so general that it is safe to trust entirely to its discriminating action in matters of this sort; and it is therefore desirable that such inaccuracies should not be merely ignored as patently false, but that they should be authoritatively contradicted. This necessary task has been admirably carried out in a very interesting volume of reminiscences which Dr. R. F. QUINTON, lately governor of H.M. Prison, Holloway, has recently published under the title of "Crime and Criminals, 1876–1910."[1]

Dr. QUINTON was a medical officer in the prison service for many years before he was called on to take up disciplinary duties as a governor, and he had thus exceptional opportunities for observing the working of the prison system from two different, and in some respects almost opposed, points of view. Moreover, the years of his service fell in a period remarkable for very far-reaching changes in ideas and in practice regarding penal methods. His account, therefore, of the evolution of our prison system is based on an unusually wide and varied experience, and it is evident from a perusal of his book that he has made the most of his opportunities, and that throughout his career he has been able to apply to the facts coming under his observation an acute and critical judgment and a flexibility of ideas which popular prejudice does not usually associate with the official mind. It is gratifying to find that an observer so well qualified to judge does not share the unfavourable opinions which so many critics have recently expressed regarding the value of the penal system in the repression of crime. He is prepared, on the contrary, to maintain that in the last three decades there has been a marked diminution in the amount of serious delinquency, and in confirmation of his view he is able to point to the steady decrease of the daily average population of our prisons, and more particularly of our convict prisons. Still more striking is the testimony which he bears to the change that has come over the type of criminal. Such appalling deeds as the Houndsditch murders, though they are frequent in the records of crime on the Continent, are providentially rare with us, and when they occur in this country the criminals are invariably aliens. Our social improvement is apparent, not only in the greater rarity of ferocious crimes, but also in the very much better standard of conduct in prisons. While recognising, of course, that this change is largely due to general civilising influences, amongst which the spread of popular education is the most

[1] London: Longmans, Green, and Co. 1910.

important, Dr. QUINTON claims that some part of the credit is also due to the more humane spirit in prison administration, to the better treatment of the prisoner in the matter of diet and employment, and to the restriction of corporal punishments to offences of gross and brutal violence. At the same time it has to be remembered that the average prisoner, though very much better than he used to be, has not yet reached the altitude of moral and intellectual superiority where the fancy of the sentimentalist sometimes places him.

The failure to recognise this fact may easily lead to such results as Dr. QUINTON humorously typifies in the story of the female prisoner provided with a volume of some literary quality and using the pages to curl her hair. The fallacy of the amateur prison reformer, as Dr. QUINTON rightly insists, lies in this substitution of a figment of the imagination for the flesh and blood reality which penal systems have to deal with, and this fallacy not only makes the captious critic discover imaginary faults but it also blinds him to what is the real defect of that system—namely, its entire unsuitability to large classes of persons who have been forcibly and very unwisely brought under its influence. So long as wandering lunatics, mental defectives of all sorts, vagrants, and inebriates are poured into prisons, it is idle to suppose that these institutions can be made to exercise their full reformatory influence on normal offenders. This obvious truth has been insisted on by prison officials in season and out of season; its force is admitted by every section of enlightened public opinion, but nothing is done to remedy the evil. Dr. QUINTON is fully justified in maintaining that the prison administration which in the face of such difficulties has devised and brought into operation such measures as the Borstal treatment of adolescent offenders, and which has raised the hygienic standard of our prisons to its present level, has proved its efficiency. This interesting sketch of our prison system may be commended to the attention of all who are interested in the problems of criminality, and their appreciation of it will doubtless be in no way lessened by the fact that the author's keen sense of humour has enabled him to see, and to make his readers see, the comic side of many of his official experiences.

Annotations.

"Ne quid nimis."

SIMPLE DIETETICS AT CHRISTMAS.

PHYSIOLOGY has long taught the advantages of simplicity in dietetic matters, and its warnings may well be borne in mind in the approaching festive season. All that counts for enjoyment is not condemned by physiology, for, as is well known, the appreciation of food contributes largely to its due appropriation for the bodily needs. A joyous environment is equally valuable and a festive occasion is not necessarily a physiological immorality. The Christmas dinner, which is a highly cherished institution, is, after all, a simple affair, and its ingredients are in general of the most wholesome kind. Why do humorists persistently represent the opposite view? Roast beef or turkey and plum pudding represent in plain terms the constituents of what is from a physiological point of view a complete diet, presenting all classes of reparative material demanded by the great processes of nutrition. It contains a balance of proteins, fats, carbohydrates, and mineral salts which go to make up healthy tissue. The plum pudding in particular is a complete food in itself, and the only risk of the Christmas meal is taking an excess of the good things which it provides. Fortunately, people nowadays do not need to be told to guard against excess. Life has become a strenuous affair, and all know that to trifle with the nutritive processes is to be left behind in the race. Politicians are prone to allude to the altered habits of the people, and what they really mean is that greater care is now exercised as to the quality and quantity of the food and drink consumed, while the people have found out that a festive occasion is not robbed of its joyousness because a temperate path is chosen. The gospel of temperance in regard to both eating and drinking has been preached most effectively by the medical profession, and laymen are numerous enough who possess a sensible acquaintance with simple physiological facts to guide them. This knowledge, however, is not a fetter to their liberties, nor does it diminish the joy of a festive season. Swinish bouts are, practically speaking, a thing of the past, and everyone rejoices that that is so. There is not a single item in Christmas cheer which need be taboo to the most rigid of physiologists when there is no abuse of the good things of the feast. There may be indeed some increased demand upon the digestive organs, but it is a demonstrated physiological fact that the cheerfulness of the occasion lightens this burden. Indigestible dishes are not, as a rule, the feature of the Christmas dinner table; it is difficult to select anything more digestible than turkey, roast beef, or Christmas pudding eaten in balanced quantities. There are plenty of other meats and sweets which are far more trying to the digestive apparatus than these. The simplicity of the English Christmas table is much in its favour, and no sensible person spoils the merit of this simplicity by indulgence. During the Christmas festivity, having regard even to the finest requirements of the functions, it is possible to be merry and wise together, a line of conduct which is in complete allegiance to physiological orders.

THE USE OF THE "SOY BEAN" AS A FOOD IN DIABETES.

THE "soy bean" (glycine hispida) has been extensively cultivated for human consumption in China, Japan, and Korea since before the time of Confucius, but in Europe and America it has been grown only to a comparatively limited extent, chiefly as a forage crop, and that within the last 15 years. It is an annual of the natural order leguminosæ. The beans are eaten as a vegetable, in soups, sometimes pickled green, boiled and served cold with a sprinkling of soy sauce, and sometimes as a salad. It forms the basis of the soy sauces which are so extensively used in the preparation of condiments; and a favourite method of preparing it in the Far East is by boiling the beans until soft, and placing the resulting mass in a warm cellar until it ferments, the result being a form of bean cheese known as "natto." An analysis of the yellow beans grown in America shows, when calculated to a water-free basis: protein, 38·50 per cent. and fat, 20·00 per cent.; and it is probable that this large percentage of easily convertible nitrogenous material accounts for the small amount of meat and other animal foods consumed by the rice-eating Chinese and Japanese. Its medical interest, however, depends largely on the fact that, unlike most pod-bearing leguminosæ, which are extremely rich in starchy material, the soy bean is almost starch free, a phenomenon which is said to be due to the presence of a diastase in the

bean capable of converting any starch formed, two-thirds into sugar, one-third into dextrin. This absence of starch suggested to observers some years ago that the bean might be advantageously used to vary the somewhat restricted diet of the diabetic, and in the *American Journal of the Medical Sciences* for December Dr. Friedenwald and Dr. Ruhräh record the results in eight cases of the disease treated by them. In each case the total quantity of urine, the percentage of sugar, and the quantity of sugar in grammes excreted in 24 hours were noted under the following conditions. First, the patient's excretions were examined on an unrestricted diet; next, under the ordinary restrictions of diabetic cookery; and, finally, on a diet of the usual diabetic foods, *plus* soy beans, the beans replacing largely the gluten of wheat bread. In each case there was a marked diminution in the total quantity of sugar excreted in a test 24 hours. Case 1 on unrestricted diet excreted 45 grammes per diem, on diabetic food 30 grammes, and on a mixture of diabetic food and soy beans 20 grammes. In Case 2 the fall was from 90 to 48 to 31 grammes; Case 3 fell from 92 to 58 to 40 grammes; Case 4 from 94 to 50 to 43; Case 5 from 58 to 0 to 0; Case 6 from 132 to 75 to 54; Case 7 from 122 to 93 to 63; and Case 8 from 143 to 79 to 40. It will thus be seen that except in Case 5, where ordinary diabetic food completely controlled the sugar excretion, there was a marked improvement on the ordinary treatment when soy beans were added to the dietary, and the conclusions arrived at by the investigators, therefore, are that the soy bean is a valuable addition to the dietary of diabetics on account of its palatability and the numerous ways in which it can be prepared, and that in some manner or other the bean causes a reduction in the percentage and total quantity of sugar passed by diabetics under the usual dietary restrictions.

MYCOSIS FUNGOIDES WITH DEPOSITS IN INTERNAL ORGANS.

AN interesting case of mycosis fungoides with rare, if not unique, features was described by Professor Paltauf of Vienna before the Section of Pathology of the Eighty-second Congress of German Naturalists and Physicians held at Königsberg in September.[1] The patient was a man, aged 64 years, who had suffered from mycosis fungoides of the skin for many years. At the necropsy changes typical of this condition were found in the skin of the trunk and limbs, some areas being atrophic, others more recently affected presenting ulcerations and crusts. On the mediastinal pleura of the right side there was a flat disc-shaped thickening 2½ centimetres in diameter, which was opposed to a similar patch on the mesial surface of the upper lobe of the lung. A smaller patch, circular in outline and sharply defined, was situated near to this, while a third was placed a few centimetres away and more dorsal in position. All three patches were flat and resembled those in the skin, especially in being redder at the periphery and paler or more yellow centrally. Numerous nodules were present in the lungs, some forming circular raised patches on the pleura, others forming tumours within the lung tissue varying in size from a cherry to a hen's egg. Some of these were degenerated centrally and presented a gelatinous appearance; others were dry and necrotic. Occasionally a central cavity with smooth walls was present. The branches of the bronchi and pulmonary artery passing to the larger nodules could usually be seen, and they were often obstructed or blocked. The peripheral parts of the nodules were markedly reddened and sharply demarcated by a firm zone of infiltration. Deposits were also found in the stomach, the mucous membrane of the fundus presenting small round ulcers with raised, infiltrated edges. Certain lymphatic glands also presented changes. The bronchial glands on the right side were enlarged, and those of the right axilla were adherent to the connective tissue, and on section showed central softening or necrosis, while the glands in the groins were firm, adherent to the connective tissue, and on section were found to be pigmented. Histological examination of the nodules in the pleura showed a granulation tissue composed of various cells similar to the typical appearances of mycosis fungoides in the skin nodules. The tumours in the lungs possessed a wide zone at the periphery, in which the alveoli were filled with fibrinous exudate, while the alveolar walls showed a cellular infiltration. Internal to this zone there was a central area made up of a granulation tissue composed of various kinds of cells, with a delicate reticulum like that of the cutaneous growths. Nuclear degeneration and the crumbling of the protoplasm described by Unna as occurring in the skin nodules were also present. A similar granulation tissue rich in cells was found in the gastric mucous membrane, while the bases of the ulcers were formed of ordinary granulation tissue. The bone-marrow and the lymph glands also presented microscopical appearances which agreed with those of mycosis fungoides. Various methods, including that of Levaditi, were employed to discover the exciting cause of the disease, but all yielded negative results. Professor Paltauf drew attention to the rarity of his case, and claimed that it was unique, since in the few recorded cases of internal tumours occurring in mycosis fungoides these have proved to be of lympho-sarcomatous nature, secondary to similar lesions in the skin.

[1] Abstracted in Centralblatt für Allgemeine Pathologie und Pathologische Anatomie of Nov. 30th.

AN ANECDOTE OF DR. CAIUS.

IN Mr. Noel Barwell's instructive and amusing account of the history of the University of Cambridge, which, with admirable colour-illustrations, has just been published by Messrs. Blackie and Son in the "Beautiful England" series, there naturally occurs some account of the famous Dr. Keys, or Caius, founder of Gonville and Caius College. This great President of the Royal College of Physicians of London, who lies buried in his "beloved College in Cambridge," shortly before his death, when the massacre of St. Bartholomew still horrified the popular imagination, was the victim of persecution at the hands of Commissioners, who burnt his collection of Catholic vestments and other religious paraphernalia within the precincts of his own college. It was the attachment of Caius to the old religion that may account for a curious and undignified story that is related of his last hours, and is probably traceable to a Puritan gossip-monger. "In his last illness," says Mr. Barwell, "he endeavoured to sustain life by a return to the natural nourishment of infancy; and divers dames of the town were privileged to minister to his wants in this respect. Being observed to be now 'froward, peevish, and full of frets,' and now tractable, docile, and of an amiable countenance, his moods and tempers were considered to vary with the individual source of his curious refreshment." The authority for this strange story, which is a kind of reminiscent travesty of the legend of Ugolino, who was suckled in prison by his daughter, is not vouchsafed us, but it is doubtless well known. An account of the life of Caius, published in 1857 by Tegg, quoted a curious passage in Dr. Moufet's "Health's Improvement." Dr. Moufet, or Moffett, physician and naturalist, who died in the year 1604 (31 years after Caius), was partly educated at Cambridge, and studied medicine under Caius. The passage is as follows: "What made Dr. Caius in his last sickness so peevish and so full of frets at Cambridge, when he sucked one woman (whom I spare to name), froward of conditions and of bad diet; and contrariwise, so quiet and well, when

he sucked another of contrary dispositions? Verily, the diversity of their milks and conditions, which, being contrary one to the other, wrought also in him that sucked them contrary effects." Curious death-bed expedients were sometimes resorted to in ancient times. We need only cite the case of King David and the Shunammite who "cherished" him in his extreme old age. The suckling story was probably indigenous in ancient Cambridge; based on fact, it may have been applied to successive unpopular characters. Caius died in distress at the persecutions to which he had been subjected, and at the gross ingratitude of the members of the society which he had founded. Religious hatred accounts for several famous death-bed traditions. Thus Voltaire is said to have died in panic-terror, but the story is very probably a clerical invention due to Voltaire's life-long scoffs at orthodoxy. France has, indeed, been the cradle of numerous discreditable stories of this kind concerning eminent free-thinkers—men of science or realistic writers—who, being dead, cannot exonerate themselves.

THE TREATMENT OF "CENTRAL OSTEITIS" WITH METAL TUBES.

THERE is a tendency in surgery, which is inherent in human nature, to strive after brilliant and spectacular effects, and any disease, chronic in its nature, and not directly fatal to the patient, which refuses to yield to rapid measures, or to give easily appreciable results, is liable to recede into the limbo of forgetfulness, and be relegated in hospitals to the house surgeon or dressers, or, owing to the pressure on beds by more acute and more rapidly healing cases, transferred eventually to the chronic wards of the great Poor-law infirmaries. Even amongst the well-to-do the same result holds good, for without the stimulus of active inquiring minds treatment does not advance, and if a subject is unattractive newer and more scientific methods of procedure are not evolved. No better example could be chosen than that of "central osteitis," for up to recent times no real advance has been made since Sir Benjamin Brodie in 1832 advocated trephining in chronic abscess of bone. The difficulty of these cases, as in the analogous ones of sinuses leading down to bone, is that they all show thickening of bone from infective osteitis and periostitis, and the walls of the cavities inside are composed of dense sclerosed bone which cannot collapse when pus is evacuated, and that there are often many small chambers and tracts of septic material in the bone which it is impossible to follow, as the dentist does in the analogous case of a carious tooth. The difficulty in diagnosis, too, in neglected cases has in the past been great, for a swelling at the end of a long bone might be simple, tuberculous, syphilitic, or possibly malignant, and the presence of a sinus did not exclude a mixed, simple, and tuberculous infection, or syphilo-sepsis. These difficulties have in recent years, however, been greatly simplified, radiography, Wassermann's reaction, and the systematic bacteriological examination of discharges having cleared the ground considerably. More particularly in the bacteriology of these conditions have advances been made, and it is now known that chronic comparatively painless abscesses may be caused by staphylococci, streptococci, pneumococci, and the typhoid bacillus, morbid conditions which serum and vaccine therapy have been able considerably to ameliorate. Nevertheless, a large field still remains for the surgeon, and Mr. Charters J. Symonds is to be congratulated on taking up the subject in his address before the Medical Society of London, and introducing to its notice a new method which has the advantages of being simple as well as efficacious, allowing also the patient to walk about, a most important desideratum, especially in hospital cases. The method described is, after opening up the medulla with a gouge or trephine, to insert a metal tube of half-inch diameter, composed of silver, German silver, or aluminium, fitted with a flange externally, and, for convenience of reintroduction, supplied with a conical pilot of boxwood or German silver. The metal tube gives rise to no irritation, can be readily taken out, boiled, and reintroduced by the patient, and does not hinder him working. At the end of six or 12 months the tube can be reduced in size, and finally a solid metal rod, with a flat nail head, or a piece of thick silver wire with a bent-over end externally, can be left in. These solid drains, Mr. Symonds finds, answer very well and might perhaps be used after six months. Practically all that seems necessary is a vent for a small amount of secretion, and this can escape by the side of the rod. As an example one case may be quoted, that of a woman aged 42 years. At the age of 11 she had acute necrosis of the tibia on the left side and smaller foci at the lower end of the right femur and both humeri. At 39 years of age a small sequestrum separated from the right femur. When seen at the age of 42 she had a painful swelling at the lower end of the right tibia, present for three months, but with the limb occasionally painful for the previous ten years. The bone was trephined and thick creamy pus came from the central cavity. It was drained by a half-inch metal tube, and the patient was soon allowed to walk about. The tube gave no trouble, she took it out, and boiled it herself daily. A smaller tube was introduced at the end of 12 months, and meanwhile the swollen tibia slowly reduced in size. At the present time, nearly two years after, the bone appears to be normal. At the discussion that followed all the surgeons present condemned the usual treatment with rubber tubes and gauze packing. Injections of plaster-of-Paris were also said to be useless, though several surgeons indicated that they had had successes with soft bismuth paste, as advocated by Dr. Beck of Chicago. Injections of iodoform and spermaceti wax after a preliminary curettage were also advocated in certain cases, especially tuberculous, and when the bone would not be too much weakened by the treatment, removal of all the diseased tissue, allowing the soft parts to fall in over the deficiency, had its advocates. Nevertheless, that a new weapon in treatment had been presented seemed to be the general consensus of opinion at the meeting.

FATAL HEMIPLEGIA IN SECONDARY SYPHILIS FAILURE OF DIOXYDIAMIDOARSENOBENZOL.

THE acceptation of the treatment of syphilis by dioxydiamidoarsenobenzol has been very general, and that in many hands it has been found a remarkable remedy for causing the disappearance of the symptoms of syphilis, sometimes after the failure of ordinary treatment, cannot be gainsaid. Evidence of limitation of its powers is at present meagre, but it is to be hoped that failures with the remedy will be fully reported, so that the medical world may be fairly guided in its attitude. The following case, which was reported at a meeting of the Société Médicale des Hôpitaux of Paris on Nov. 4th by M. Georges Guillain and M. P. Ravaut, is an example of such failure, and is of interest on other grounds—the rarity of hemiplegia and death in the secondary period of syphilis. A woman, aged 28 years, was admitted into the Cochin Hospital on August 14th, 1910, suffering from left hemiplegia, which began on the previous evening. Twelve months previously she was treated at the Broca Hospital for a chancre. After a month she abandoned treatment against advice. On admission she was in a state of obnubilation with dysarthria. There was flaccid hemiplegia of the left limbs, but the face was involved only slightly. On the paralysed side the knee-jerk was feeble,

the abdominal reflex was abolished, Babinski's sign was present, and forced flexion of the toes caused reflex retraction of the lower limb (a phenomenon recently described by Marie and Foix in lesions of the pyramidal tract). There was incontinence of urine and fæces. The pupils reacted to light. Around the anus were condylomata. Lumbar puncture yielded clear fluid containing numerous lymphocytes and polynuclears, but with the ultra-microscope no spirochætæ could be seen. On the 15th, 16th, 17th, and 18th an injection of 2 centigrammes of biniodide of mercury was given. Slight improvement in the mental condition and in the paralysis took place. On the 19th some dioxydiamidoarsenobenzol was received from Professor Ehrlich and 0·45 gramme was injected. No toxic symptoms followed the injection and the condylomata diminished, but the mental condition and the hemiplegia appeared to be worse. On the days following the injection arsenic was found in the urine. Death took place on the 26th. The necropsy showed the absence of any cerebral hæmorrhage. There was a small focus of softening in the posterior segment of the right internal capsule, slightly involving the lenticular nucleus and optic thalamus. To the naked eye all the viscera were normal, but microscopic examination of the liver showed slight fatty degeneration. It is noteworthy that the patient was improving under the mercurial treatment before the injection of the dioxydiamidoarsenobenzol, and that the cause of the hemiplegia was not a gross incurable hæmorrhage but a small focus of softening. M. Guillain and M. Ravaut do not suggest that death occurred in consequence of the injection but in spite of it.

THE USE OF THE REVOLVER.

WE desire to express our deep sympathy with the relatives of the three policemen murdered by revolver shots recently in Houndsditch, with their wounded companions, and with the relatives of the latter. We need not recapitulate the facts attending a tragedy to which full publicity has been accorded in the public press, and which is fresh in the memory of all, in order to point out, as we desire to do once more, the extraordinary indifference of the legislature to the habitual carrying of firearms in this country by criminals and others. In the recent affray the only persons who were not at liberty to carry firearms, if they chose to do so, were the police, and it may be that what then happened will lead to the police force being better armed in future, at any rate, when their duties have to be carried out in dangerous localities, or in their being permitted to use firearms when such are employed against them. The general freedom of anyone who chooses to do so to carry a pistol in Great Britain has been a subject of frequent comment in THE LANCET, and we have called attention constantly to accidents, as well as crimes, due to what is apparently a common practice with certain classes of society. A futile Act of Parliament imposes upon the sale of these weapons certain restrictions which include the production of a ten-shilling licence by the purchaser. Anyone who has such a licence is entitled to walk about with a deadly weapon in his pocket, or, as far as we are aware, in his hand, as long as he does not otherwise transgress the law, and even if he has no licence at all he is only committing an offence affecting the national exchequer, for which the Inland Revenue authorities, if they detect him, are able to prosecute him and have him fined. In our opinion, the carrying of a revolver in any public place should render any person found guilty of doing so liable to severe penalties, not excluding imprisonment, with such exemption as may be required to meet the exigencies of military training. For the defence of a man's house he must be permitted to own a revolver, if he should desire to do so, but it might be advantageous to the community if, even as a preliminary to this, the householder were to be obliged to comply with suitable but not onerous conditions. A tax, heavy in proportion to the cost of the cheaper class of weapon, should keep out of the country a large number of revolvers now brought in from abroad, and should make the question of purchase a serious one for schoolboys and for the needier class of lunatics, irresponsible persons, and criminals. Here again exemptions affecting weapons to be used for military and naval purposes or in dangerous foreign countries could be framed without difficulty. The searching of persons suspected of infringing the law, or of introducing revolvers into the country without paying duty at the port, are matters which would follow as a matter of course. We do not claim that legislation upon the lines which we suggest would render such crimes as that which recently took place in Houndsditch impossible, but desire rather to protest against an easy-going indifference which renders them easy. The question of arming the police is one of some difficulty, and is not one upon which we feel called to express an opinion, except to point out, as we have done, the freedom permitted to the criminal to arm himself as he pleases.

THE TREATMENT OF DYSPHAGIA IN LARYNGEAL TUBERCULOSIS.

THE pain on swallowing which occurs in laryngeal tuberculosis constitutes one of the most distressing features of this condition, and often leads to severe emaciation from the deficient amount of food which the patients are able to swallow. In 1908 Dr. Hoffmann[1] of Munich recommended the injection of alcohol into the internal branch of the superior laryngeal nerve and described good results from this procedure. In 1909 Dr. Sturmann reported a case with severe dysphagia which was relieved by this method. Dr. J. Dundas Grant has recently recorded in THE LANCET[2] six cases which were selected for this treatment on account of the extreme severity of the pain. They seemed to him to justify its recommendation. An interesting paper was published by Dr. Gottfried Roth of Bad Reichenhall in the *Münchener Medizinische Wochenschrift* of Oct. 18th, recording his experience of this method of treatment, which he has employed in 33 cases. Of these, 23 were men and 10 were women, and all excepting three suffered also from advanced pulmonary tuberculosis as well as laryngeal. In half of the cases there was perichondritis of the epiglottis with ulceration, in the other half there were infiltrations and ulceration of the vocal cords. In 15 perichondritis and ulceration of the arytenoid cartilages were also present, and in 6 infiltration and ulceration of the posterior wall of the larynx. Dr. Roth found that alcohol injections were useful in cases where there was dysphagia, provided this was not due to changes in the pharyngeal mucous membranes or in the tonsils. In all of his cases the ordinary local anæsthetics had proved ineffective. Most of the patients found more pain and difficulty in swallowing liquids than solid or semi-solid food, and in some the swallowing of saliva caused great pain and discomfort. Most of them found it easier to swallow warm or lukewarm food, cold things tending to excite painful cough. Neither fever nor advanced cachexia contra-indicated the use of alcohol injections. The method of giving them is by means of Schlösser's alcohol syringe fitted with a special needle devised by Dr. Hoffmann. The patient should be recumbent with a pillow under the neck in order to stretch the soft tissues. A characteristic spot, tender to pressure, is easy to find between the hyoid bone and the thyroid cartilage, corresponding to the spot where the

[1] Münchener Medizinische Wochenschrift, No. 14, 1908.
[2] THE LANCET, June 25th, 1910, p. 1754.

internal branch of the superior laryngeal nerve pierces the thyro-hyoid membrane. This spot is usually present on the side corresponding to the laryngeal lesion, though in cases where the epiglottis or both arytenoids are affected tender spots are present on both sides. The skin over the tender area should be cleaned by means of alcohol and ether, and the larynx steadied by means of the thumb. The index finger applied to the tender spot serves as a guide, and the needle of the syringe is inserted for 1½ centimetres. It is then turned upwards and outwards. If the patient complains of severe pain radiating towards the ear, this may be taken as proof that the nerve has been reached. A small quantity of 85 per cent. alcohol heated to 45° C. is then cautiously injected, the amount being usually 1 gramme, though sometimes 1½ or even 2 grammes have been used. In most cases only one side was injected, but in two an injection was given on the opposite side immediately after the first. No serious unpleasant symptoms occurred after the injections. One patient developed a severe attack of coughing during the injection, so that the needle went into the subcutaneous tissue. This was followed by cutaneous emphysema, which disappeared after two days. One patient with advanced cachexia fainted after the injection. Sometimes pain in the ear and headache followed. The dysphagia was greatly relieved in all of the cases except one. The improvement occurred almost directly in a few of the cases, but in most it developed within one or two days after the injection, and lasted, on an average, seven days. In one case the improvement was permanent. Apart from this, the longest period of relief was 21 days. The shortest was one day. The injection appeared to have no effect whatever, either beneficial or otherwise, on the cough, but in some cases the hoarseness appeared to be less. Since the good effects only last, as a rule, about seven days, the injections have to be repeated, and in one of Dr. Roth's cases this was done five times. It is not suggested that this procedure has any curative value, or that it should be employed where local anæsthetics are effective. Dr. Roth is careful to suggest its use only in cases of advanced laryngeal disease where swallowing is difficult or almost impossible, and where local anæsthetics have failed. The condition of these patients is so grave and their sufferings are so severe that any procedure affording even temporary relief is welcome, if it can be shown that its employment does not cause unpleasant symptoms or after-effects.

CUTANEOUS DIPHTHERIA.

THE subject of cutaneous diphtheria does not appear to have received much attention in this country. A short time ago Dr. Alan B. Slater reported in our columns[1] a remarkable case of three years' duration. The patient was a girl, aged 13 years, whose body was covered with vesicles containing the diphtheria bacillus. The disease appeared to have begun as an acute attack of diphtheria of the conjunctivæ. The vesicles developed on the vulva, and subsequently on the body generally. In the *Boston Medical and Surgical Journal* of Nov. 10th Dr. E. H. Place has reported a case of fatal primary diphtheria of the skin. An infant, aged 7 months, was admitted into the Boston City Hospital on March 24th, 1908. She was breast-fed, and had always been well except for eczema of the pubic region, groins, and thighs, which dated from birth. Two days before admission swelling and redness became marked over the area of the abdomen, genitals, and thighs which was covered by the diaper. There was a considerable thin discharge. On examination the child was well developed and fairly well nourished. The nose, mouth, and throat were normal and there was no nasal discharge. The temperature was subnormal. The pulse was 140 and the first cardiac sound was softened. A few crackling râles were heard over the bases of the lungs. The skin of the lower third of the abdomen, vulva, perineum, anterior part of the buttocks, and upper part of the internal surfaces of the thighs was red, swollen, and covered with a greyish hyaline membrane which was firmly adherent and when forcibly removed left a granular area which bled easily. Scattered over this area were small variously shaped islands of normal skin. There were no vesicles or pustules. The treatment consisted in the administration of strychnine and 1200 units of antitoxin and the application of boric acid dressings. On the third day after admission the membrane was clearing rapidly, but there was no improvement in the general condition, and the heart's action was rapid and very weak. The child's colour became a peculiar grey and the first cardiac sound was almost imperceptible. Numerous crepitant râles were heard at the bases of the lungs and death occurred. Cultures from the skin showed typical diphtheria bacilli which were identified both by cultural tests and inoculation of animals. Cultures from the nose and throat were negative. The necropsy showed some hyperplasia of lymphoid tissue, "septic spleen," incipient bronchopneumonia, and pus in the middle ear. The source of infection could not be discovered. Evidently the disease was inoculated into the eczematous lesions by some attendant in washing the baby or changing her diapers. The onset of the diphtheria was masked by the previous eczema, and not until the disease was widespread was medical advice sought. Hence the severity of systemic symptoms. Dr. Place finds that diphtheria of the skin associated with diphtheria of the respiratory tract is not rare at the Boston City Hospital. It has been seen in the following forms during the last three years. 1. On the face and hands, appearing like impetigo contagiosa, less often with distinct membrane. Cultures show virulent diphtheria bacilli and both types clear rapidly under antitoxin. 2. On the auricle, chiefly the concha, extending from the middle ear; or behind the auricle inoculated upon the eczema so common in children. 3. Inoculated upon lupus vulgaris of the face after curetting. 4. In wounds and abscesses of the neck and face. 5. Inoculated upon varicella lesions, most commonly on the vulva or vagina.

[1] THE LANCET, Jan. 4th, 1908, p. 15.

WE regret to announce the death at the advanced age of 92 of Dr. James Edward Pollock, consulting physician to the Brompton Hospital for Consumption.

THE library and offices of the Royal Society of Medicine, 15, Cavendish-square, W. (temporary address), will be closed from Saturday, Dec. 24th, to Wednesday, Dec. 28th, both days inclusive.

THE BREAD AND FOOD REFORM LEAGUE.—Miss Yates, the honorary secretary, has received a letter from Lord Knollys conveying His Majesty's gracious approval of the work described in the report.

UNIVERSITY OF SHEFFIELD.—Mr. R. J. Pye-Smith having resigned the professorship of surgery, a resolution has been adopted accepting the resignation with great regret, and adding: "Mr. Pye-Smith, who is the senior member of the teaching staff, has been a teacher of surgery for 34 years, first in the old Medical School, next in the University College, and finally in the University, and the council desire to place on record their appreciation of the distinguished services which he has rendered to the cause of medical education in Sheffield."—Dr. E. W. Adams has been appointed lecturer in materia medica and assistant to the professor of materia medica, pharmacology, and therapeutics.

THE PRACTICAL STERILISATION OF POTABLE WATERS BY MEANS OF THE ULTRA-VIOLET RAYS OF LIGHT.

BY JOHN C. THRESH, M.D., D.SC. LOND.,
LECTURER ON PUBLIC HEALTH, LONDON HOSPITAL MEDICAL COLLEGE, E.;
AND
JOHN F. BEALE, M.R.C.S. ENG., D.P.H. OXON.,
DEMONSTRATOR OF PUBLIC HEALTH, LONDON HOSPITAL MEDICAL COLLEGE, E.

THE view generally held that water requires purification chiefly, if not exclusively, in order to prevent outbreaks of typhoid fever is probably erroneous. It has frequently been remarked that when a pure water-supply has replaced a polluted supply the prevalence of typhoid fever has decreased even when epidemics had not followed the use of the impure water. The town of Newark is a case in point. Prior to June, 1893, the supply was from the River Ouse, and the town was rarely free from typhoid fever. In the year mentioned water from the New Red Sandstone replaced the river water and immediately the prevalence of fever decreased. The following table shows the immediate and remarkable effect of the introduction of the pure water-supply:—

Cases of Typhoid Fever Notified each Six Months in the Borough of Newark-on-Trent for 3½ Years Preceding and 3½ Years Following the Introduction of a Pure Water-supply. The New Supply was laid on July, 1893.[1]

	January to June.	July to December.	Total.
1890	14	39	53
1891	60	65	125
1892	11	58	69
1893	50	28	78
1894	1	9	10
1895	2	6	8
1896	3	4	7

Total for 3½ years preceding introduction of pure water, 297.
Total for 3½ years following introduction of pure water, 53.

Recent observations, however, tend to demonstrate that a pure water-supply has a marked effect in reducing the mortality from other diseases, and Dr. Sedgwick and Dr. MacNutt of Boston have recently shown that this, which they call the Mills-Reincke phenomenon, has a basis on fact and is explained by Hazen's theorem that the substitution of a pure for an impure water-supply is followed almost invariably by a decrease in the general death-rate and by a special decrease in the death-rates from enteric fever, diarrhœa, phthisis, pneumonia, &c., and in infantile mortality also. The following table will serve as an illustration, as it enables us to compare the death-rates for two towns which are almost identical in character and in close proximity to each other, in one of which a pure water-supply was introduced, whilst the other continued to use its more or less impure supply:—

Death Rates per 100,000.[2]

—	1894–98 before filtration at Albany.	1900–04 after filtration at Albany.	Decrease.	Per cent. reduction of death-rates.
Albany.				
Typhoid fever	104	26	78	75
Diarrhœal diseases	125	53	72	57
Children under 5 years	606	309	297	49
Total deaths	2264	1868	378	17
Troy.				
Typhoid fever	57	57	0	0
Diarrhœal diseases	116	102	14	12
Children under 5 years	531	435	96	18
Total deaths	2157	2028	129	6

Remarks.—Filtered water was introduced into Albany in 1899. The water-supply of Troy has remained practically unchanged.

[1] Thresh: Water and Water-supplies, third edition, p. 162.
[2] Whipple: The Value of Pure Water, p. 10.

A study of the statistics for the borough of Newark-on-Trent, so far as they can be obtained from the Registrar-General's annual reports, shows the same marked decrease in the general death-rate after the introduction of the purer water-supply. The following figures are taken from the Registrar-General's returns, and when the corrections for variations in populations are made it is found that the average death-rate for the town during the five years preceding the one in which the pure sandstone water was introduced averaged 18·4, whilst in the five years following it was only 15·6, a result much like that observed at Albany, U.S.A. Only about 3 per cent. of this decrease could be attributed to enteric fever.

Year.	Population.	Total deaths registered.	Year.	Population.	Total deaths registered.
1888	14,083*	248	1894	14,571†	240
1889	—	269	1895	—	239
1890	—	278	1896	—	244
1891	14,571†	288	1897	—	218
1892	—	266	1898	—	275
1893	—	300	1901	16,077‡	—

* 1881 census. † 1891 census. ‡ 1901 census.

Assuming the correctness of this theorem the question of purification of public water-supplies becomes of enormously increased importance, since such purification will not merely prevent a few cases of enteric fever annually but it will effect a large annual saving of lives which otherwise would have been sacrificed, and especially of lives of young children.

During recent years many attempts have been made to improve upon the old, and where properly conducted excellent, system of purification by means of slow sand filtration. Most of these systems have been failures, but three remain which may play an important part in the purification of water in the future. These are sterilisation by means of (*a*) ozone, (*b*) chlorine, and (*c*) ultra-violet rays of light. The first, the ozone process, labours under the disadvantage of requiring an exceedingly complex electrical installation which requires specially skilled supervision. The second, or chlorine process, suffers temporarily from sentimental objections. When these are overcome, as doubtless they will be since such treated waters are now being used for public supplies, the process will probably be largely adopted, especially when a cheap supply of electricity is not available. The third is not subject to any of these disadvantages. Where electricity is available an installation of a very simple character requiring very little supervision can be laid down, and if the results already obtained can be maintained for long periods the process should have a great future before it, since it can be used for purifying the supply of a single house as well as for the purification of the supply to the largest city.

It has long been known that the invisible or ultra-violet rays of the solar spectrum are capable of producing marked chemical changes, and recent experiments have shown that rays of a certain wave length are much more powerful than those of shorter or longer length. The rays emitted by the Cooper Hewitt mercury vapour lamp are found to be particularly rich in these active rays, and in 1906 Nogier and Therenot demonstrated that the rays of this lamp exerted a marked bactericidal action. Nogier conceived the idea that the lamp might be ultilised for the sterilisation of water, and his further researches demonstrated that his idea was correct. The mercury lamp is used for the production of the rays, but it having been discovered that glass absorbed the specially active rays fused silica has been substituted for it. Nogier immerses the lamp in the water to be sterilised, but other forms of apparatus are made in which the water does not come in contact with the lamp.

A priori it would be imagined that, as the intensity of the action of the rays varies inversely as the square of the distance from the source of light, the immersed lamp should have a more powerful effect, and this is supported by the results of the experiments, which we have recently been able to conduct in the hospital laboratory. For the Nogier lamp it is also claimed: (1) that with a given amount of electrical current much more water can be sterilised than with an external lamp; (2) that the lamp being kept cool will last longer; and (3) that the apparatus can be made smaller, more compact, and automatic. The advocates of the external lamp say that the immersed lamp is more liable to fracture and that in time it will become covered

with calcareous deposit and lose its efficiency. On the other hand, it is affirmed that the difficulty which at first occurred from breakages has been surmounted, and that any calcareous deposit which may form can be easily removed with dilute acid, and it is alleged that the external lamp, on account of the heat engendered, becomes affected to such an extent that its sterilising effect is speedily decreased owing to some molecular change in the internal surface of the fused silica. Time, however, is necessary to demonstrate the truth or otherwise of these allegations.

The Nogier lamp has been severely tested in France. The small-sized machine used for this purpose, both by Miguel in Paris and by ourselves in London, consists of an aluminium cylinder about 12 inches long and 6 inches in diameter, containing a Cooper Hewitt quartz lamp with an internal diaphragm, which causes the water entering at one end to travel along the cylinder in close proximity to the lamp. After traversing the length of the lamp it passes away through an opening at the end opposite to the inlet. By a very ingenious arrangement no water can flow through the cylinder unless the lamp is glowing. The instant the current is cut off or the lamp ceases to glow the cylinder tips up and the flow of water ceases. It is practically impossible, therefore, to obtain water from the cylinder unless it has been submitted to the action of the ultra-violet rays. This small lamp is capable of purifying from 50 to 200 gallons of water per hour according to the original character of the water. Possibly more could be sterilised in some cases, but in our experiments we have been unable to obtain sufficient pressure from the London mains to force more than this quantity through it.

Miguel's experiments showed that in clear and bright water many bacteria are killed after from 5 to 20 seconds' exposure to the ultra-violet rays, and that the most resistant spore-bearing bacteria were destroyed in from 30 to 60 seconds. The bacillus coli was killed in from 15 to 20 seconds, the bacillus typhosus in from 10 to 20 seconds, the cholera vibrio in from 10 to 15 seconds, &c.

Of the remarkable bactericidal action of the ultra-violet rays there could be no doubt, but it was observed that a faint turbidity in the water or the presence of traces of colloid matter greatly retarded the action. We were anxious, therefore, to test the apparatus with polluted waters such as might be used for potable purposes if they were efficiently sterilised. A small apparatus capable of treating 200 gallons per hour was therefore installed and connected with a large tank holding sufficient water for experimental purposes. Another connexion was also made with the water main, so that the apparatus could be kept working for hours at a stretch.

The first series of experiments was directed towards ascertaining whether the treated water suffered any change which could be detected by chemical analysis. In all the experiments the apparatus worked with an electrical current of 6 ampères and 130 volts, and it was found that the amount of current used was just under one Board of Trade unit per hour. For the chemical and physical tests the water was passed through the apparatus at the rate of only 10 gallons per hour, so as to obtain a maximum effect from the ultra-violet rays. The analysis showed that the chemical constituents of the water remained unchanged. The slight differences in the results were practically within the limits of error of a careful analysis. No ozone could be detected. It is improbable, therefore, that the sterilising effect is due to ozone, as some have surmised. One effect, however, was observed which is worth recording. One of the samples of water treated had a faint but decided odour suggestive of sewage, whereas the treated water was devoid of odour. The analytical results in this case were :—

	Untreated water.	Treated water.
Free ammonia, parts per 100,000 ...	0·0474	0·0436
Albuminoid ammonia	0·0188	0·0192

The difference in all other respects was *nil*. The very slight reduction in the free ammonia does not appear to be capable of explaining the disappearance of the odour. This was an exceedingly impure water, yet it was found that the apparatus practically sterilised it.

In passing through the steriliser the temperature of the water is slightly raised. When the water was travelling at the maximum rate, 200 gallons per hour, the rise in temperature varied from 0·2° to 0·4° C. When passing at the minimum rate used in the bacteriological experiments, 30 gallons per hour, the increase in temperature was 1·8° to 2·2° C. The bacteriological results were as follows :—

Experiment 1.—Water from main run into a dirty cistern and well stirred. Samples of treated water taken at half-hour intervals. Rate of flow 30 gallons per hour throughout. Under the head of "gelatin" is recorded the number of bacteria per c.c. capable of growing on jelly in four days at 20° C., and under "agar" the number of bacteria per c.c. growing in two days at 37° C. upon an agar medium.

—	Gelatin.	Agar.	B. coli.
Untreated water	3200	1180	Present in 100 c.c.
Treated water 1	0	0	Absent in 500 c.c.
,, ,, 2	2	3	,, ,,
,, ,, 3	4	0	,, ,,

The water therefore was practically sterilised and freed from the bacillus coli.

Experiment 2.—The tank was next filled with water and 0·5 per cent. of filtered sewage added. The untreated water had a faint odour of sewage. The treated samples were free from odour. The rate of flow varied from 11 to 60 gallons per hour. The pressure available did not permit of a larger quantity being passed through the apparatus.

—	Gelatin	Strepto-cocci.	B. coli.	B. enteri-tides sporogenes.
Untreated water	5500	In 10 c.c.	In 0·1 c.c.	In 100 c.c.
Treated water—rate of flow :				
11 gallons per hour	18	Absent in 110.	Absent in 636.	Absent in 500.
22 ,, ,,	10	,,	,,	,,
45 ,, ,,	16	,,	,,	,,
60 ,, ,,	23	,,	,,	,,

All these treated waters are of the highest degree of bacterial purity, though not sterile.

Experiment 3.—This experiment, or rather series of experiments, was spread over a period of several days. The apparatus was directly connected with the main in order to obtain sufficient pressure to work the apparatus at its maximum capacity. From time to time a sample of the water passing into the steriliser was collected for examination.

—	Gelatin	Agar.	B. coli.	Rate of flow per hour.
Untreated water ...	140	80	In 100 c.c.	—
Average treated water	5	1	Absent in 500.	80 gallons.
Untreated water ...	62	34	In 20 c.c.	—
Treated water	2	0	Absent in 500.	80 gallons.
,, ,,	4	2	,, ,,	100 ,,
,, ,,	3·5	1·5	,, ,,	120 ,,
Untreated water... ...	110	48	In 100 c.c.	—
Treated water	6	3	Absent in 500.	140 gallons.
,, ,,	6	3	,, ,,	160 ,,
,, ,,	6	3	,, ,,	200 ,,

The last average (200 gallons per hour) does not include one abnormal result, the treated water giving 50 bacteria on gelatin and 18 in agar per c.c. Even with this exceptional number of bacteria the bacillus coli was absent in 500 c.c. of the treated water.

The whole of the results show that with a fairly clear and bright water the ultra-violet rays as applied in the apparatus employed produced a sterilising effect sufficiently marked to convert a dangerously polluted water into a safe potable water.

The extreme simplicity of the apparatus and its comparative cheapness both as to first cost and working, render it particularly suitable for purifying clear waters such as

are usually derived from wells, especially when electrical current is available. When turbid waters have to be treated, such as supplies from streams and river, prior filtration will be absolutely necessary to render the water bright. The apparatus could in such cases be connected with the outlet from a mechanical filter.

The experimental results thus far obtained are so encouraging that experiments on a very much larger scale are about to be commenced. There is little doubt that for small installations and for suitable waters when electrical current is available treatment with ultra-violet rays will be more economical than any other process yet devised, but it remains to be seen whether, under such circumstances, it will be able to compete with the chlorine process as now simplified and improved. It may be that under one set of circumstances one will be especially applicable, whilst under other circumstances the other will possess advantages. In any case it is no longer justifiable for any community to be supplied with water of a potentially dangerous character when by one or other of these processes potable waters can be practically sterilised and rendered safe at the cost of much less than a penny per 1000 gallons.

MOTORING NOTES.

BY C. T. W. HIRSCH, M.R.C.S. ENG., L.R.C.P. LOND.

An Alleged Custom of the Motor-car Hiring Trade.

IN a case recently heard by the Lord Chief Justice in the King's Bench Division the plaintiff sued a motor-car hiring company to recover damages for personal injury sustained through the alleged negligence of the defendant's chauffeur. It was alleged by the defence that the chauffeur was let with the car and became the servant of the hirer and not of the company, and that it was the custom of the trade that the hiring company took all risks, save and except liability for personal injuries to a person or persons hiring the car. The Lord Chief Justice, however, held that in such cases the chauffeur was the servant of the defendant, and that the company were liable for his negligence, if any, and that the alleged custom was of an extraordinary and most reaching kind. In the case in question, in which the car overturned as a result of excessive speed in taking a bend of the road, the plaintiff received a cut on the temple and other injuries, for which the jury awarded her £300 and costs. This case is certainly of interest, as it proves that when a car is hired with a driver the hiring company are liable for any accident the result of negligence on the part of the chauffeur.

The Ashcroft Combination Valve Grinder.

One of the most likely causes of loss of power in a motor is bad compression. If this is not due to gummed piston rings the valves are probably leaking. The former cause is easily diagnosed by pulling the starting handle round and listening, if needful with a stethoscope, for a hiss in the crank case. Should this not be detected, the conclusion, if the compression is bad, is pitted valves or leakage round the valve caps or sparking plugs. Placing oil round these parts and again pulling the engine round will reveal by the appearance of bubbles if the latter is the seat of lesion, and if not then the valves should be ground in. Fine emery or ground glass is usually employed, and the Ashcroft grinder will be found an improvement on the generally employed screw-driver. The action of this tool is an oscillating one, with the arc of oscillation gradually advancing to the right; this prevents the cutting of grooves, and results in the valve seat being ground smoothly and absolutely true. Two sizes of small coil springs are also supplied, which if placed under the valve head during the operation facilitate frequent raising of the valve and thus allow inspection as well as new grit and oil to run on the bearing surfaces; this renders the grinding more rapid while ensuring a better seat. The tool can also be used as a breast drill or as a ratchet for tapping and drilling, or for inserting or removing screws in awkward or inaccessible positions, and it is fitted with a chuck for either square or taper shank drills. It is sold by Messrs. Brown Brothers, Limited, of Great Eastern-street, London.

The Petrol Rebate.

In a recent number of *Justice of the Peace*, in answer to the question can a medical man, who obtains the allowance of half the duty on his car, be able to employ his automobile for other than professional purposes, the opinion was given that doing so would destroy the right to the exemption. This matter has now been brought to the notice of the Treasury, and the Lords Commissioners are of opinion that if a car is kept for the purposes of the profession it can be used for other purposes than merely conveying the doctor to and from his patients. Though this broad reading is pleasant, as far as it permits a doctor to take an occasional holiday in his car, it is well to bear in mind that a good many insurance policies do not cover risks that may occur when cars are employed for election purposes. For the present elections are over, while the experiences of some who have lent cars for them cannot be very pleasant.

The Automobile Association and the Motor Union.

The agreement for the amalgamation of these two bodies has now been concluded. The subscription will be £2 2*s.* a year, but members of the Motor Union who have not hitherto been members of the Automobile Association will be entitled to continue their subscription for a period of three years at the present rate of £1 1*s.* per annum. The badge is to be in the shape of the present Motor Union one, but in addition to the letter M with wings AA will also be in the centre. The Earl of Lonsdale will be President; Mr. Joynson-Hicks, chairman; Mr. Stenson Cooke, secretary; and Mr. A. B. E. Cheeseman, technical manager.

The Diagnosis of Clattering "Bruits."

The ability of analysing an adventitious noise in a car is much like "spotting" a cardiac lesion. The normal car has a steady quiet hum when running as our hearts have their "lubb-dup." When there is a variation it may mean the presence of some disorder, which, if not detected quickly, may have a serious termination. Among the causes that make a motor "talk" should be considered want of lubrication of bearings, both on engine and in gearbox and transmission shaft, slackness of nuts allowing play, and worn bearings. It should also be remembered that a loose mud-guard or even lamp may produce sounds that terrify; a slack undershield may have like results. The parts especially to investigate, if the engine begins to "talk," are: The clutch fork—is it worn? Does it rattle? Is the universal joint in the cardan shaft worn, or is the tort in the gearbox? Having eliminated rattling of kit or tools, lamps, lamp-brackets, and undershield, the engine should be run with the clutch out. If the sound is absent, it is probably either the clutch-fork, gearbox-bearing, or universal joint in the propeller shaft that is at fault.

Motor Road Maps.

The medical motorist who sends his name and address to Horlick's Malted Milk Company, Slough, Bucks, will be presented gratis with a set of three maps—England, Scotland, and Ireland, each in a separate case—on a 12 miles to an inch scale, showing the first- and second- class motoring roads and other roads, and the distances between the various towns.

The Adler Doctor's Car.

A good many professional men have asked me about this car, which attracted attention at the recent show, and concerning which I wrote in THE LANCET of Feb. 19th, 1910. My opinion of most automobiles on which I report is based on the result of the impression I obtain by running them a few hundred miles in the day or two during which they are at my disposal. The best proof of the use of a motor for a doctor is the actual results obtained by an owner during a prolonged period, when it is employed every day. The following letter, from Mr. Leslie, of "Fairwater," Evesham, may be of help to any who are considering the purchase of one of these really excellent machines:—

I think that a special word should be said for the 12-h.p. Adler as a car especially suitable for our work. Its reliability is truly marvellous and the class of workmanship is of the highest order. My two-seated 12-h.p. Adler with Morgan body I purchased in August, 1909, and during the time I have had it it has run close on 15,000 miles. I have not yet had an involuntary stop nor has a single adjustment had to be made, not even a nut has had to be tightened. The only renewal has been the brake jaws of the back wheel brake, which necessarily got worn from constant use. With the exception of this trifling replacement the car has not cost me a penny in repairs. On average roads I get 30 miles to the gallon. The car is practically silent on top speed and is the greatest pleasure to drive. Fitted with a Morgan body it is unusually smart; mine is of the semi-racing type. I have no hesitation in recommending the car to my professional brethren, and I do not think it could be excelled in reliability, general excellence, and cheapness in running.

KING EDWARD'S HOSPITAL FUND FOR LONDON.

Distribution of Awards.

A MEETING of the Governors and General Council of King Edward's Hospital Fund for London was held on Dec. 14th at St. James's Palace, when the Duke of TECK presided.

His Serene Highness, in opening the proceedings, referred to the irreparable loss which the Fund had suffered by the death of its Founder and Patron, and in acknowledging, on behalf of himself, Lord Iveagh, and the Speaker of the House of Commons, their appointment as Governors of the Fund, expressed their intention to endeavour to follow the high tradition which had been established by the late King Edward and His present Majesty until the time came for the appointment of a new Royal President.

In the absence of Lord Rothschild (honorary treasurer), Lord REVELSTOKE reported that the amount received by the Fund to Dec. 10th, after payment of expenses, was £146,584 10*s*. The Fund had also received an unusual legacy during the year in the residue of the estate of Mr. Matyear, consisting of market garden property in Fulham.

Sir HENRY BURDETT said that at present he was not in a position to state precisely the sum that the League of Mercy would be able to give. When, however, the time arrived for drawing the cheque the Governors and Council of that Fund would, he believed, have good reason to be satisfied with the amount.

The Chairman of the Distribution Committee (Sir WILLIAM CHURCH) read the report of that committee. He stated that this year the sum of £150,000 would be distributed amongst the London hospitals, as against £147,000 in 1909. The number of hospitals applying for grants was 106, as against 104 last year. The committee recommended that the policy of setting aside grants towards amalgamation of the throat, nose, and ear hospitals in place of separate awards to any of the four institutions concerned should still be continued, and they voted £2000 this year for this purpose. No general scheme of amalgamation had been submitted by the hospitals during the year for the consideration of the Fund, and the committee would have recommended that the grant of £3000 made in 1908 should lapse in accordance with the condition attaching to grants which remain for two years unapplied, had they not been informed that the possibility of a practicable arrangement between certain of the hospitals was under consideration. They accordingly recommended that the grant of £3000 made in 1908 should be renewed for this year. The total sum held in reserve, in respect of annual grants, towards a general scheme of amalgamation now amounted to £7500 in addition to the capital grant, amounting under certain conditions to at least £10,000, promised by the Fund. The following grants made in 1908 for special purposes and retained in accordance with the practice of the Fund still remained unapplied:—General Lying-in Hospital, £100 to surgical equipment; London Lock Hospital, £1500, being the balance of a grant to the rebuilding of the out-patient department in Dean-street; Miller General Hospital, £989, being the balance of a grant to extension; West End Hospital for Diseases of the Nervous System, £1000, granted to rebuilding, subject to the scheme being submitted and approved; Wimbledon Cottage Hospital, £50 to improvements. The committee recommended that these unpaid grants should be renewed, with the exception of the grant to the West End Hospital, which it was recommended should lapse. The committee state that they have taken care that the needs of the poorer districts in the outlying parts of London should receive their due share of consideration. In addition to maintenance grants on the scale determined by the circumstances of the various hospitals, the committee have recommended capital grants in several cases where schemes of improvement have been sanctioned. Amongst these are final grants of £1000 to the rebuilding of St. Mary's Hospital for Women and Children, Plaistow, and £5000 to the extension of the West Ham Hospital.

The committee were glad to learn that a scheme had been prepared by the Convalescent Homes Committee for rendering a certain number of beds in consumption sanatoriums in the country available for patients direct from London hospitals, more especially from consumption hospitals which had no country branches of their own, and viewed with special satisfaction the facilities possessed by consumption hospitals which had country branches for the transfer of suitable cases to surroundings more favourable to recovery. In the case of St. George's Hospital "the committee had had under their special consideration the appearance, in the general accounts of the hospital for 1909, of certain payments to the school which were stated to be for work done for the hospital and which were formerly paid out of a discretionary fund. The inquiries made by the committee as to the legitimacy of this change confirmed the statement in the annual report of the hospital that the payments in question were made on account of definite work done, chiefly pathological and bacteriological examinations, in connexion with the actual treatment of patients. That is, the payments were for the kind of work which is described in Appendix III. of the Report of Sir Edward Fry's Committee as work which would have to be paid for in any case, and which would have to be taken into account in assessing the payments and receipts on either side.[1] Such work, moreover, differs entirely from the general benefits, described in paragraphs 13 to 22 of the report as being conferred by medical schools on hospitals, and as being fairly set off against the benefits conferred by the hospitals on the schools. The opinion of the Fund that, on the principles laid down by Sir Edward Fry's Committee, specific payments for such definite work done in respect of the treatment of patients, whether made to the school or to any other agency, could be charged to the general funds of the hospital, while no other payments to the school could be so charged, was notified to St. George's, in reply to a question from the hospital, by the Executive Committee in March, 1909. But on looking into the method by which the amount fairly chargeable to the hospital on account of this work had been arrived at, the Distribution Committee came to the conclusion that the apportionment of the expenses of the laboratories as between the treatment of patients and medical education required investigation, and they have invited the hospital to submit further details in order that the Committee may satisfy themselves that the payment made to the school bears a proper proportion to such definite work done for the hospital." In the meantime they recommend that the grant to the hospital this year should be retained until the Fund is satisfied that the financial relations between hospital and school are in accordance with the principles intimated by the Fund in March, 1909, and that the general account of the hospital in respect of 1909, as well as 1910, is clear from any payment on account of medical education.

Mr. WILLIAM LATHAM, K.C., chairman of the Convalescent Homes Committee, read the report of that committee. It showed that the sum of £5000 would be apportioned amongst convalescent homes and consumption sanatoriums. The amount distributed in 1909 was £4000, which included £1000 brought forward from 1908. The number of applications eligible for consideration amounted to 45 from convalescent homes and 8 from consumption sanatoriums, as against 37 and 4 respectively last year. The committee reported that they had been able to make arrangements in the case of three sanatoriums for beds to be placed at the disposal of London hospitals during the year 1911 in return for grants made by the Fund. The total number of beds thus secured amounted to 18, situated as follows: 2 beds at the Kelling Sanatorium, Norfolk; 6 beds at the Northampton Sanatorium, Creaton, Northants; and 10 beds at the Devon and Cornwall Sanatorium, South Brent, Devon. In recommending the allocation of these country beds to hospitals in London the committee had taken the view that preference should be given (in order of relative size) to the two consumption hospitals which had no country branches, and that the rest of the beds should be divided between the two largest of the general hospitals which apply to the

[1] The following is an extract from this appendix, which the committee have adopted as part of their report:—"It must be remembered that, apart from these (i.e., the general services rendered by the Schools to the Hospitals), which are separately dealt with in the Report, par. 21, the Schools, in most cases, undertake many specific laboratory examinations solely for the purpose of helping the physicians and surgeons to form correct diagnoses in the exclusive interests of the patients, and that these would have to be paid for by the Hospitals in any case. Where such examinations are made in a laboratory entirely maintained by a school, it is obvious that, in any exact assessment of the payments and receipts, on either side, they would have to be taken into account."

Fund. They accordingly recommended the following allocation: 8 beds to the City of London Hospital for Diseases of the Chest, 4 beds to the Royal Hospital for Diseases of the Chest, 3 beds to the London Hospital, and 3 beds to Guy's Hospital.

The Duke of TECK, in moving the adoption of the reports and awards, said that the reports afforded gratifying evidence of the continued progress of the Fund. The invested capital was now very considerable, but the income from investments provided less than half the amount distributed, and for the balance reliance had to be made upon the support of the charitable public, including the contributions collected by the League of Mercy. Among the amounts received during the year His Serene Highness mentioned, with special gratitude, the sum of £500 received from His Majesty, the patron of the Fund, in augmentation, from £500 to £1000, of the annual subscription he gave when President; and also the annual subscription of £100, with which H.R.H. the Prince of Wales had signified his interest in the Fund. The receipts also included an annual subscription of £5000 from Mr. Walter Morrison, and an anonymous donation of £10,000. The amount distributed had again been increased. Last year it reached, for the first time, a total sum of £150,000. This year £150,000 had been given to the hospitals alone, making, with £5000 to consumption sanatoriums and convalescent homes, a total of £155,000. The original goal of £150,000 had thus been left behind, and in response to the necessarily increasing demands a fresh advance had been begun. He particularly drew attention to the grants for special purposes. In practically every case, he said, where such a grant was at all large a scheme had been submitted by the hospital and carefully examined by the committee. This practice ensured that the Fund knew and approved of the manner in which the grant was going to be spent. Referring to questions that had arisen during the past two years as to the exact method of applying the recommendations of Sir Edward Fry's committee on the subject of hospitals and medical schools, His Serene Highness said it was, and had always been, the intention of the Fund to carry out the recommendations of that committee in the letter and in the spirit. The report of the Convalescent Homes Committee showed that the scheme which they originated for placing beds at consumption sanatoriums by means of grants from the Fund, at the disposal of patients in London Hospitals who were urgently in need of country treatment, had now taken practical shape. A beginning could be made on Jan. 1st next, with 18 beds in three different sanatoriums. It was proposed that most of these beds should be allotted to the two consumption hospitals which had no country branches of their own, and the remainder to two of the largest general hospitals. It was not possible to secure any more beds without making capital grants. But the committee proposed to consider applications for capital grants another year. If the scheme on its present small scale proved successful, it could be thus enlarged. The committee would, of course, take due precautions to ensure that any arrangement made should be fair to London, while the sanatoriums would doubtless see that it was fair to the localities for which they were originally founded.

The work of the Executive Committee had included this year a consideration of the question of hospital contracts. It had often been suggested that it would be an advantage for the hospitals of London to enter into joint contracts, and thus secure the advantages of purchasing on a larger scale than they could do as separate buyers. Last year a scheme was actually started in New York, and the Executive Committee appointed a subcommittee to inquire into the subject and ascertain whether the Fund could usefully take any action in the matter. The report of this subcommittee, of which Mr. John G. Griffiths acted as chairman, had recently been issued, and he hoped that the careful statement which it contained of the possible advantages and difficulties of coöperative purchase by groups of independent voluntary hospitals might be of assistance to the hospitals which were now trying this experiment, or which might be thinking of doing so; and that it might satisfy the public that the possibilities of economy in this direction had not been overlooked.

The CHIEF RABBI (the Rev. Dr. ADLER) seconded the adoption of the reports, which was put and carried.

The Duke of TECK, before announcing the appointments for the coming year, alluded to the great loss the Fund had sustained during the year in the death of Mr. Hugh C. Smith, who had served for so many years as a trustee, member of the council, chairman of the Executive Committee, and latterly member of Finance Committee, and also to the loss by death of the very valuable services of Mr. John Langton as one of the visitors of the Fund. With regard to the general council, it was proposed to reappoint the whole of the members as at present, and the same with the Executive Committee and the Finance Committee. On the Distribution and Convalescent Homes Committees it was proposed to reappoint the present members except Mr. Partington, who had been prevented by ill-health from taking a full share in the very arduous work of the Distribution Committee. He would join the Convalescent Homes Committee, as would also Sir William Bennett, and Mr. Leonard Cohen would be appointed to the Distribution Committee.

The services of three eminent Commissioners—Lord Mersey, who would be chairman, Lord Northcote, and the Bishop of Stepney—had been secured for the committee which would inquire into the out-patient question and would begin work early in 1911. The Executive Committee had recommended the following terms of reference:—

To consider and report generally as to the circumstances and conditions under which patients are admitted to the casualty and out-patient departments of the London voluntary hospitals, and especially as to what precautions are taken to prevent the admission of persons who are unsuitable, and as to whether adequate provision is made for the admission of such persons as are suitable; and to make such recommendations as may seem to them desirable.

A vote of thanks to the Duke of Teck for presiding concluded the proceedings.

MEDICINE AND THE LAW.

Tuberculosis and Milk-supply: Question of Procedure raised at Sunderland.

AT Sunderland recently an inquiry was held by Mr. T. R. Colquhoun Dill, barrister-at-law, on behalf of the Board of Agriculture and Fisheries, to whom a farmer had appealed against an order made by the Sunderland corporation. The appellant supplied milk to a dairy in Sunderland, as did other farmers also. A sample of milk was taken in the street by an inspector under the corporation from a can belonging to the dairy in question and was found on analysis to contain the bacilli of tuberculosis. The dairyman stated that the milk from which the sample in question came was from the appellant's farm, and it was accordingly visited by the medical officer of health of the corporation, who was accompanied by a veterinary surgeon. The farmer owned a herd of 20 cows, from whose milk he supplied the dairy, and 16 of these had already been submitted to the tuberculin test with negative results. The remaining four had not been so tested, and the veterinary surgeon, who detected in three of them no signs of tuberculous disease, observed what he considered to be suspicious indications affecting the udder of the fourth. The corporation, which was acting upon powers given it by a local Act of Parliament obtained by the borough of Sunderland in 1907, gave notice to the farmer to appear before its health committee, and when he did not do so made an order prohibiting the sending of the milk of any of the four cows referred to above into the borough. The farmer then had the tuberculin test applied in the case of the cow with the suspected udder, when it was found that there was no reason to believe that she was affected with tuberculosis. This he communicated to the corporation, which rescinded the order, so far as it affected the cow in question, leaving it as before in the case of the other three; and against the order, as applied to them, the farmer appealed. It was argued upon his behalf before Mr. Dill that the procedure adopted was wrong, as it cast upon the farmer the burden of proving that the three cows remaining under the order were free from tuberculosis, without the corporation having first made out a *primâ facie* case that they were diseased. It was pointed out that the Act under which the proceedings had been taken gave power to inspect the cows and to take samples of milk, and it was submitted that if after this the medical officer of health was of the opinion that tuberculous disease was caused, or likely to be caused, to persons residing in the borough and consuming the milk, a notice might then be served on the owner of the cows to

attend before the health committee to show cause why an order should not be made prohibiting him from supplying milk in the borough. A notice had, as has been stated, been given to the farmer, who had not appeared in response to it, and it was argued on his behalf that the necessary conditions precedent to giving it and to making the order had not been fulfilled. On behalf of the respondents it was argued that they had complied with the Act of Parliament, and had made an entry upon the farmer's premises and an inspection as required of them upon an order obtained from a magistrate, but that a passage in the Act, to which Mr. Dill drew the attention of the town clerk, which provides that "the medical officer of health may require" a cow to be milked in his presence and a sample to be taken for analysis, merely permitted this to be done, but did not render it necessary. It was urged that the corporation as custodian of the public health, was entitled to act as it had done, and if it entertained a suspicion with regard to the three cows to continue its order against them until the appellant had shown that the animals were free from disease. After hearing the arguments and evidence adduced by both sides, Mr. Dill intimated that he would report to the Board of Agriculture and Fisheries and that the reply of the Board would follow in due course. The decision of the Board of Agriculture and Fisheries has since been communicated to the parties, and is to the effect that the order of the corporation was made without due cause in so far as it related to the three cows in question. The Board further found that the appellant was not in default and withdrew the order made against him, the costs of the appeal to be paid by the corporation.

Action against a Farm Colony for the Loss of a Leg.

A German named Max Wedler brought an action recently in the High Court against the council and committee of management of a German Industrial and Farm Colony at Ware for damages for negligence and breach of duty on their part. He had been admitted to the colony and set to perform some digging after being supplied with shoes. He stated that he complained of these that they were too large, but was compelled to wear them and was refused permission to wear his own, that while he was digging, earth got into the shoes and chafed his foot, and that on his informing Mr. Mann, the manager, he was sent by him to a man called Theil, stated to be a "pensioner" in connexion with the colony, who gave him a plaster. Theil also told him that he was suffering from gout and massaged his foot. Later, the plaintiff become seriously ill, but according to his statement, a medical man who was called in to see him did not examine his foot. Eventually he was sent to the Herts County Hospital, where it was found that he was suffering from osteomyelitis, owing to which his leg was amputated below the knee; and the nature of the case was explained to the jury by Dr. C. E. Shelly, senior medical officer of the hospital. The same witness expressed the opinion that an abrasion of the skin such as that described would supply a very obvious means for the infection which had taken place. Counsel on behalf of the plaintiff contended that he had two causes of action—the neglect by the defendants of a duty to supply him with clothing reasonably suited for the work he had to do, the evidence being that the shoes were too large and were responsible for the injury which caused his condition; and, secondly, the treatment given by Theil. Counsel for the defence did not rely upon the defence of common employment on the part of the plaintiff and Theil, but submitted that apart from that there was no case for the defendants to answer. This view was taken by Mr. Justice A. T. Lawrence, who held that there was no evidence of negligence against the defendants; there might possibly be a case against Mann and Theil, who might, however, have an answer to it. Judgment was accordingly given for the defendants without the case being submitted to the jury.

A RAILWAY MEDICAL SCHOOL IN MANCHURIA.—We learn from a Shanghai correspondent that the South Manchurian Railway Company is contemplating the establishment of a medical school at Dairien, Manchuria, where instruction will be given in all the most modern methods of medicine and surgery.

CENTRAL MIDWIVES BOARD.

SPECIAL meetings of the Central Midwives Board were held on Dec. 13th and 15th, at Caxton House, Westminster, Sir FRANCIS H. CHAMPNEYS being in the chair.

The Board considered the following charges, amongst others, against the midwives whose names are given below, and ordered them to be struck off the roll. For not explaining that the case was one in which the attendance of a registered medical practitioner was required, nor handing to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E. 19 (5):—Margaret Aldred, being in attendance as a midwife at a confinement, the child having been born prematurely, and being asphyxiated and feeble. Hannah Arrowsmith, being in attendance as a midwife at a confinement, the patient suffering from headache and sickness and from high temperature. Ellen Culshaw, being in attendance as a midwife at a confinement, the patient being ill, suffering from abdominal pains and high temperature, with diarrhœa and vomiting. Sarah Chapman, being in attendance as a midwife at a confinement, rigor occurring with persistently offensive lochia and a high temperature. Mary Hannah Davis, being in attendance as a midwife at a confinement, the child being ill. Mary Jane Dickenson, the patient suffering from bronchitis. Adelaide Harker, being in attendance as a midwife at a confinement, the child suffering from inflammation of the eyes. Kate Martin, being in attendance as a midwife at a confinement, the patient suffering from a serious rupture of the perineum. Mary Ann Miles, being in attendance as a midwife at a confinement, the child suffering from inflammation of the eyes. The following were also struck off the roll for the reasons given in each case:—Martha Holland, that she was convicted at the Oxford City police-court of having been found drunk and incapable on a public highway. Beatrice Inscoe, that she persistently refused to submit to the reasonable supervision and inspection of the local supervising authority or to conform to the rules of the Board, and with intent to evade such supervision and inspection she frequently changed her address without notifying the local supervising authority as required by Rule E. 20. Emily Jones, that being in regular attendance as a nurse upon a patient suffering from uterine cancer, she nevertheless carried on her practice as a midwife, contrary to the provisions of Rule E. 16, and without having undergone disinfection to the satisfaction of the local supervising authority as required by Rule E. 5. Marian Phillis McCormac, that being in attendance at a confinement she was under the influence of alcohol when she delivered the patient; after the delivery of the placenta she failed to remove it from the room as required by Rule E. 10, but left it under the bed until next day; and she was again under the influence of alcohol and unable to speak clearly when she visited the patient on the seventh day after the confinement. Edith May Dalchow, that at the Aylesbury petty sessions she pleaded guilty to a felony and was sentenced to one month's imprisonment. Sarah Susannah Emptage, that being in attendance as a midwife at a confinement she failed to adopt the antiseptic precautions required by Rules E. 3 and 7; she washed the baby's eyes with the water it had been bathed in, she washed the patient with the same water and rag as she had used for the baby, and she did not take the patient's temperature at any time. Sarah Flitton, that being in attendance as a midwife at a confinement she did not take any antiseptic precautions whatever; she was uncleanly in her person, house, and clothing; she never employed antiseptics, being ignorant of how to use them; and she never took the temperature of her patients, not understanding the use of a clinical thermometer. Elizabeth Jane Haines, that she persistently neglected to make herself acquainted with the obligations of the rules of the Board. Julie Mitchell, that she was irregular in her attendance on her patients during the lying-in period, and that she persistently failed to conform to the directions of the local supervising authority. Amelia Williams and Mercy Ann Wilson, that notwithstanding repeated warnings they neglected and refused to comply with the rules of the Board and the directions of the local supervising authority. Catherine Charlton, that being in attendance as a midwife at a confinement she entered in her register that two children were

full time and of good health, well knowing that these statements were false, and that one child had died two days before the date of the entry. Esther Green, that being in attendance as a midwife at a confinement she took the patient's temperature once only, and failed to attend to the cleanliness and comfort of the patient as required by Rule E. 11. Elizabeth Murray, that being in attendance as a midwife at a confinement she falsely entered in her register of cases that the condition of the mother on the date of her last visit was "moderate," whereas she was dead.

The following were censured after charges against them had been considered:—Jane Carroll, Sarah Dean, Sarah Bath, Sarah Elizabeth Brown, Ellen Gentle, Martha Howard, Alice Waters, and Barbara Young.

The following were cautioned after charges against them had been considered:—Emma Gleeson and Sarah Linton.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeons: E. B. Townsend and F. D. Lumley to the *President*, for three months' course of hospital study; H. W. Finlayson to the *Victory*, for R.N. Barracks; E. J. Finch to the *Blake;* and C. S. Facey to the *Warrior*. Staff-Surgeons: J. A. Forrest, H. R. Gardner, N. J. Roche, P. G. Williams, J. G. Peebles, and W. E. Gribbell to the *President*, additional, for three months' course of hospital study; C. J. E. Cock to the *Thames;* O. Rees to the *St. George;* J. K. Raymond to the *Foresight*, A. K. Smith-Shand to the *Natal;* H. H. Pearse, L. E. Dartnell, S. Conner, R. Waterfield, G. E. Macleod, and F. C. B. Gittings, to the *President* for three months' course of hospital study; and J. Thornhill to the *Vivid*. Surgeons: C. H. Dawe to the *Pembroke;* S. H. Vickers to the *King Alfred;* J. A. Thompson to the *Pembroke;* F. M. V. Smith, E. B. Kenny, L. C. E. Murphy, and H. B. German to the *President*, for three months' course of hospital study; and G. R. McCowen to the *Victory*, additional, for disposal.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel R. H. Hall, from Colchester, has been appointed Senior Medical Officer at Bermuda, in succession to Colonel J. C. Culling, who has taken up duty as Principal Medical Officer of the Western Command at Chester. Lieutenant-Colonel G. Cree, on arrival home from India, has been posted to the Eastern Command and appointed Medical Inspector of Recruits, vice Lieutenant-Colonel G. E. Hale, D.S.O. Lieutenant-Colonel J. Maher, from Wynberg, has been appointed to the medical charge of Queen Alexandra's Military Hospital, Grosvenor-road. Lieutenant-Colonel F. W. C. Jones, from Tidworth Park, has embarked in the transport s.s. *Plassy* for a tour of service in India. Lieutenant-Colonel J. R. Forrest has been transferred from Bullevant to Cork. Lieutenant-Colonel W. G. Birrell has taken over medical charge of the Royal Herbert Hospital at Woolwich, in succession to Lieutenant-Colonel W. Dick. Major H. Herrick has been appointed to the command of the Station Hospital, Hyderabad, Sind, vice Captain P. P. O'Keefe, who has been transferred to the Station Hospital at Roorkee. Major G. B. Stanistreet, from Salisbury, has been posted to the London District. Major F. J. C. Heffernan, on completion of a tour of service in India, has been appointed Recruiting Medical Officer, London District. Major G. A. Moore has been placed in medical charge of the Military Families Hospital at Chatham. Major H. V. Prynne has been appointed Medical Officer at the Royal Military Academy, Woolwich. Major W. B. Winkfield, Captain C. H. Furnivall, and Captain G. F. Rugg have embarked on the transport s.s. *Plassy* for a tour of service in India. The following officers (Captains) have joined at the Royal Army Medical College for a course of instruction for promotion to the rank of Major: W. Wiley, H. Harding, M. F. Grant, M. D. Ahern, H. C. Winckworth, R. J. B. Buchanan, H. H. A. Emerson, A. M. Rose, P. Farrant, C. J. Wyatt, and M. G. Dill. Captain A. M. MacLaughlin has been appointed Specialist Sanitary Officer to the Scottish Command. Captain W. M. B. Sparkes has been placed in Medical Charge of the Staff and Departments at Dublin. Captain J. W. West, Captain S. M. Adye-Curran, and Captain J. H. Spencer have arrived in India for duty. Captain T. S. Coates has been appointed Medical Officer at the Royal Arsenal, Woolwich. Captain W. D. C. Kelly has taken over the duties of Specialist in Advanced Operative Surgery at Dublin. Captain E. J. H. Luxmoore, on arrival home from India, has been posted to the Eastern Command. Lieutenant A. G. Jones, from Parkhouse Camp, has joined at Tidworth Park. Lieutenant H. G. Robertson has been transferred from Sheffield to Richmond.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel H. B. Melville, civil surgeon of Simla, has been appointed to the medical charge of the Army Headquarters Staff and Establishments during the absence of Captain A. E. Lister. Lieutenant-Colonel F. J. Dewes, civil surgeon at Shwebo, has been granted combined leave and furlough home from India for two years. The services of Lieutenant-Colonel J. A. Cunningham, civil surgeon at Lahore and professor of forensic medicine and toxicology at the Medical College, Lahore, have been placed at the disposal of the Government of India. Lieutenant-Colonel D. St. J. D. Grant has been appointed to officiate as Principal Medical Officer of the Sirhind and Jullundur Brigades in succession to Lieutenant-Colonel J. W. Rodgers. Lieutenant-Colonel A. L. Duke has been confirmed in his appointment as First-class Agency Surgeon and Administrative Medical Officer of the North-Western Frontier Province. Major W. Lethbridge, civil surgeon of Wana, has been appointed by the Foreign Department of the Government of India Agency Surgeon, Mewar Bhil Corps, vice Captain L. J. M. Deas, proceeding on leave. Major H. A. Smith, civil surgeon of Agra, has been nominated as an Ordinary Fellow of the Allahabad University. Major F. L. Blenkinsop has had his leave extended by six months on medical certificate. Major J. M. Crawford, on return from leave, has been appointed Civil Surgeon at Benares. Captain R. M. Carter, Captain J. P. Cameron, Captain L. J. M. Deas, and Captain M. J. Quirke have arrived home from India on leave. Captain S. R. Godkin has been appointed Specialist in Advanced Operative Surgery to the Sixth (Poona) Division. Lieutenant M. A. Nicholson has embarked for India in the transport s.s. *Plassy* from Southampton.

BRITISH RED CROSS SOCIETY.

At a meeting of the City of London branch of the British Red Cross Society, which was held at the Mansion House on Dec. 16th under the presidency of the Lady Mayoress, it was reported that at the Prudential Assurance Company most successful classes had been established, and 115 of the men members of the staff and 46 of the lady members had already passed the first-aid examinations, and 42 other ladies were waiting to hear the result of their examinations. After the Christmas holidays it was expected that similar classes would be started in other City establishments.

ARMY AND NAVY MALE NURSES' COÖPERATION.

A meeting of this association was held at the Royal Horticultural Hall, Westminster, on Dec. 16th, when Colonel Sir Edward Ward presided. He said that it was not generally realised that the army and navy were the only general training schools which certified fully-trained male nurses. Every year the services discharged fully-qualified nurses of exemplary character, whose training had been costly, and who, until the coöperation was founded, drifted into unsuitable channels where their skill found no market value. To give these men a start in life it was only necessary to make their professional nursing merits known. Sir William Allchin and Surgeon-General W. Babtie, V.C. (Deputy Director-General), also addressed the meeting, after which a bazaar and people's bargain sale was opened by Mrs. George Alexander.

VITAL STATISTICS.

VITAL STATISTICS OF LONDON DURING NOVEMBER, 1910.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious disease, it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 5·0 per 1000 of the population, estimated at 4,872,702 persons in the middle of the year. In the three preceding months the rates were 3·9, 5·3, and 5·9 per 1000 respectively. The lowest rates last month were recorded in Paddington, Kensington,

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING NOVEMBER, 1910.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1910.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.†
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cerebro-spinal meningitis.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.		
LONDON	4,872,702	—	996	668	—	154	3	29	493	4	2347	5·0	—	409	21	56	45	—	23	—	118	672	1·4	7742	17·4
West Districts.																									
Paddington	153,004	—	22	9	—	5	—	1	10	1	48	3·3	—	7	—	—	—	—	—	—	9	16	1·1	204	14·8
Kensington	184,635	—	26	14	—	1	—	2	12	—	55	3·1	—	10	—	1	3	—	—	—	—	14	0·8	272	16·6
Hammersmith	127,413	—	29	25	—	3	—	1	8	—	66	5·4	—	19	1	4	4	—	1	—	2	31	2·5	192	16·3
Fulham	181,282	—	30	37	—	3	1	1	15	—	87	5·0	—	14	—	3	3	—	1	—	1	22	1·3	243	14·6
Chelsea	75,457	—	7	18	—	1	—	—	1	—	27	3·7	—	1	—	1	—	—	—	—	—	2	0·3	95	13·6
City of Westminster	167,233	—	21	20	—	2	—	—	9	—	52	3·2	—	2	—	2	1	—	2	—	—	7	0·4	200	14·0
North Districts.																									
St. Marylebone	125,195	—	13	9	—	3	—	—	8	1	34	2·8	—	2	1	1	1	—	—	—	2	7	0·6	209	18·5
Hampstead	95,729	—	14	10	—	1	—	1	6	—	32	3·5	—	2	—	1	—	—	—	—	—	3	0·3	92	11·3
St. Pancras	237,792	—	56	34	—	4	—	—	21	—	115	5·0	—	32	3	1	4	—	—	—	3	43	1·9	420	19·2
Islington	353,356	—	81	90	—	11	1	—	33	—	216	6·4	—	64	1	6	4	—	2	—	9	86	2·5	647	19·8
Stoke Newington	54,838	—	6	2	—	2	—	—	1	—	11	2·1	—	—	—	—	—	—	—	—	3	3	0·6	75	14·9
Hackney	239,979	—	42	22	—	16	—	3	38	—	121	5·3	—	4	1	1	—	—	2	—	5	13	0·6	344	15·6
Central Districts.																									
Holborn	53,142	—	8	5	—	2	—	—	3	—	18	3·5	—	3	—	1	1	—	1	—	2	8	1·6	86	18·2
Finsbury	94,578	—	13	22	—	7	—	1	24	—	67	7·4	—	12	1	2	2	—	1	—	9	27	3·0	207	23·7
City of London	17,132	—	2	4	—	—	—	—	—	—	6	3·7	—	—	—	—	—	—	—	—	—	—	—	20	13·4
East Districts.																									
Shoreditch	114,387	—	20	13	—	4	—	—	14	1	52	4·7	—	17	1	2	2	—	—	—	1	23	2·1	222	21·2
Bethnal Green	131,579	—	22	22	—	8	—	1	20	—	73	5·8	—	6	—	3	2	—	2	—	8	21	1·7	276	22·1
Stepney	314,379	—	58	37	—	16	—	3	47	—	161	5·3	—	12	2	2	2	—	1	—	11	30	1·0	499	17·3
Poplar	172,432	—	48	16	—	6	—	2	28	—	100	6·0	—	3	3	2	2	—	—	—	5	15	0·9	329	20·5
South Districts.																									
Southwark	211,832	—	47	30	—	8	—	1	26	—	112	5·5	—	62	1	7	2	—	1	—	9	82	4·0	453	23·3
Bermondsey	127,238	—	30	26	—	5	—	1	15	—	77	6·3	—	32	1	5	4	—	—	—	6	48	3·9	296	24·9
Lambeth	327,074	—	73	43	—	16	—	3	33	—	168	5·4	—	28	1	4	3	—	4	—	7	47	1·5	561	18·5
Battersea	188,222	—	46	24	—	6	—	2	17	—	95	5·3	—	13	2	2	3	—	2	—	3	25	1·4	267	15·9
Wandsworth	305,838	—	67	31	—	10	—	2	28	1	139	4·7	—	5	—	—	—	—	2	—	4	11	0·4	355	12·8
Camberwell	286,058	—	44	40	—	8	—	1	33	—	126	4·6	—	46	—	3	—	—	1	—	5	55	2·0	486	18·4
Deptford	119,642	—	36	13	—	2	1	1	19	—	72	6·3	—	7	—	1	—	—	—	—	4	12	1·0	204	18·7
Greenwich	112,935	—	18	14	—	—	—	1	12	—	45	4·2	—	1	—	—	—	—	—	—	5	6	0·6	139	13·1
Lewisham	164,899	—	53	26	—	4	—	—	5	—	88	5·6	—	2	2	1	—	—	—	—	2	7	0·4	183	12·1
Woolwich	135,422	—	63	12	—	—	—	1	7	—	83	6·4	—	3	—	—	2	—	—	—	3	8	0·6	166	13·7
Port of London	—	—	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

† The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

the City of Westminster, St. Marylebone, and Stoke Newington; and the highest rates in Islington, Finsbury, Poplar, Bermondsey, Deptford, and Woolwich. The prevalence of scarlet fever showed a marked decline from that recorded in the previous month; among the several metropolitan boroughs this disease was proportionally most prevalent in St. Pancras, Poplar, Bermondsey, Battersea, Deptford, Lewisham, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals at the end of the month was 1727, against 1439, 1630, and 1825 at the end of the three preceding months; the weekly admissions averaged 183, against 160, 207, and 229 in the three preceding months. Diphtheria was rather less prevalent than it had been in October; the greatest proportional prevalence of this disease was recorded in Hammersmith, Fulham, Chelsea, Islington, Finsbury, the City of London, and Bermondsey. The Metropolitan Asylums Hospitals contained 866 diphtheria patients at the end of last month, against 580, 746, and 852 at the end of the three preceding months; the weekly admissions averaged 106, against 76, 108, and 120 in the three preceding months. The prevalence of enteric fever showed a considerable decrease from the somewhat excessive figures for the two preceding months; among the several metropolitan boroughs this disease was proportionally most prevalent in Hackney, Finsbury, Bethnal Green, Stepney, Southwark, Bermondsey, and Lambeth. There were 134 enteric fever patients under treatment in the Metropolitan Asylums Hospitals at the end of November, against 58, 141, and 169 at the end of the three preceding months; the weekly admissions averaged 16, against 32 and 25 in the two preceding months. Erysipelas was proportionally most prevalent last month in Hackney, Finsbury, Bethnal Green, Stepney, Poplar, and Deptford. The 29 cases of puerperal fever notified during the month included 3 in Hackney, 3 in Stepney, 3 in Lambeth, and 2 each in Kensington, Poplar, Battersea, and Wandsworth. The 4 cases of cerebro-spinal meningitis notified during the month belonged respectively to Paddington, St. Marylebone, Shoreditch, and Wandsworth.

The mortality statistics in the table relate to the deaths of persons actually belonging to the several boroughs, the deaths occurring in institutions having been distributed among the boroughs in which the deceased persons had previously resided; the death-rates are further corrected for variations in the sex and age constitution of the populations. During the five weeks ending Dec. 3rd the deaths of 7742 London residents were registered, equal to a corrected annual death-rate of 17·4 per 1000, the rates in the three preceding months having been 10·3, 11·9, and 12·6 per 1000 respectively. The death-rates last month ranged from 11·3 in Hampstead, 12·1 in Lewisham, 12·8 in Wandsworth, 13·1 in Greenwich, 13·4 in the City of London, 13·6 in Chelsea, and 13·7 in Woolwich, to 20·5 in Poplar, 21·2 in Shoreditch, 22·1 in Bethnal Greeen, 23·3 in Southwark, 23·7 in Finsbury, and 24·9 in Bermondsey. The 7742 deaths from all causes included 672 which were referred to the principal infectious diseases; of these, 409 resulted from measles, 21 from scarlet fever, 56 from diphtheria, 45 from whooping-cough, 23 from enteric fever, and 118 from diarrhœa. No death from any of these infectious diseases was recorded last month in the City of London; among the metropolitan boroughs they caused the lowest rates in Chelsea, the City of Westminster, Hampstead, Wandsworth, and Lewisham; and the highest rates in Hammersmith, Islington, Finsbury, Shoreditch, Southwark, Bermondsey and Camberwell. The 409 deaths from measles were more than three times the average number for the corresponding period of the five preceding years; this disease was proportionally most fatal in Hammersmith, St. Pancras, Islington, Finsbury, Shoreditch, Southwark, Bermondsey, and Camberwell. The 21 fatal cases of scarlet fever showed a decline of 36 from the corrected average number, and included 3 in St. Pancras, 3 in Poplar, 2 in Stepney, 2 in Battersea, and 2 in Lewisham. The 56 deaths from diphtheria were 25 below the corrected average number; the greatest proportional mortality from this disease was recorded in Hammersmith, Finsbury, Bethnal Green, Southwark, and Bermondsey. The 45 fatal cases of whooping-cough showed a decrease of 29 from the corrected average number; the highest death-rates from this disease last month were recorded in Hammersmith, Fulham, St. Pancras, Finsbury, Shoreditch, Bethnal Green, Bermondsey, Battersea, and Woolwich. The 23 deaths from enteric fever were 8 below the corrected average number; of these 23 deaths, 4 belonged to Lambeth and 2 each to the City of Westminster, Islington, Hackney, Bethnal Green, Battersea, and Wandsworth. The 118 deaths from diarrhœa were 33 fewer than the corrected average number; this disease was proportionally most fatal in Paddington, Stoke Newington, Finsbury, Bethnal Green, and Bermondsey. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was 27·4 per cent. above the average.

* Including membranous croup.

† The death-rates are corrected for variations in sex- and age-constitution of the populations of the several boroughs, the population of England and Wales being taken as the standard.

Correspondence.

"Audi alteram partem."

LAVATORY ACCOMMODATION FOR WOMEN.

To the Editor of THE LANCET.

SIR,—I desire to bring to your notice the accompanying resolutions which were passed at a conference of representatives of the following bodies on Nov. 21st:—The Royal Sanitary Institute, the National Health Society, and the Women's Imperial Health Association. Mrs. Oxley Grabham, who has conducted an extensive investigation into the sanitary accommodation provided by railway companies for women, was also present.

With regard to resolution No. 1 it may be said that although the system now so largely adopted by the railway companies of providing lavatory carriages on long-distance trains, has proved an enormous benefit to both men and women travellers, still there is considerable evidence that the accommodation for women at railway stations all over the country is often insufficient and insanitary, whilst the necessity for payment, which is still universal for women at railway stations, operates harshly on the travelling public of the more necessitous classes.

Appropriate communications have been addressed on the subject of the aforesaid resolutions to the Local Government Board, the Board of Trade, the London County Council, and the principal railway companies, and the conference desires to enlist the powerful aid of THE LANCET in making the resolutions known to its readers, or in any other way helping a reform which is so intimately associated with the health and comfort of the female members of the community.

I am, Sir, yours faithfully,

LOUIS C. PARKES,
Chairman of Council, the Royal Sanitary Intitute.

London, S.W., Dec. 16th, 1910.

[RESOLUTIONS.]

1. That in the opinion of this meeting sufficient sanitary accommodation for women's use should be provided free of charge by sanitary authorities, railway companies, and in places of public entertainment and resort.
2. That in the opinion of this meeting it is essential in the interests of public health and decency that there should be an attendant in charge of the sanitary convenience provided for women's use in public places.
3. That in the opinion of this meeting all sanitary conveniences provided for the use of women should be subject to periodical inspection by women sanitary inspectors appointed by the local sanitary authorities.
4. That this meeting desires to call the attention of the railway companies, and managers of theatres and other places of public resort, to the unsatisfactory character of much of the sanitary accommodation provided for women, and to the necessity for having only sanitary conveniences of good modern type and construction.

THE POSITION OF HOMŒOPATHY.

To the Editor of THE LANCET.

SIR,—The appreciative and sympathetic references recently made by the press to the death of my old and valued friend, Dr. Dyce Brown, whose ability, amiability, and keen artistic sense had won for him the affection and respect of a wide circle, must have made others besides myself think whether it is not time to reconsider our attitude towards homœopathy. The objections to that method of treatment, so far as I understand them, are based on the belief that its professors are practising what they do not believe, and are therefore guilty of a grave breach of the moral law, in consequence of which they are scorned

and rejected of men, boycotted in medical circles, excluded from hospital appointments, and practically from social intercourse with their brethren. It is not likely that respectable people honestly trying to do their duty according to their lights should feel anything but sore when they are thus branded with the mark of Cain, and a bitter feeling has thus grown up between the two equally qualified sections of medical and surgical science, which, I venture to think, is little creditable to ourselves. For what great crime, after all, have the homœopathists committed? The absurd doctrines of Hahnemann have long since been abandoned, and all that they now do is to treat disease on a much more scientific principle than ours, by often-repeated doses of strong tinctures instead of the nauseating tablespoonfuls and wineglassfuls which too often nauseated the patient and retarded his chances of recovery. I have no doubt that Sir Richard Quain lost the Presidentship of the Royal College of Physicians of London, which he had fairly earned by earnest and successful work, because he met Dr. Kidd in consultation over Lord Beaconsfield's case, and I well remember the storm in a tea-cup which ruffled the calm waters of Pall Mall, when an attempt was made to "run in," or rather "run out," Dr. Murrell and Professor Ringer for an alleged therapeutic heresy, an attempt which properly and ignominiously failed. I suppose my professional brethren are too much beaten down by the authority of the Royal Colleges to air their views. I am, Sir, yours faithfully,

Finzean, Dec. 19th, 1910. R. FARQUHARSON.

THE MOTOR FUNCTIONS OF THE STOMACH.

To the Editor of THE LANCET.

SIR,—In his letter of Dec. 17th Mr. Gray excuses himself for ascribing Bayliss and Starling's discovery of secretin to Wertheimer, who had nothing to do with it, by saying that in the same paragraph "an extensive quotation, duly ascribed to Starling, appears." However gratifying this must have been to Professor Starling, a quotation from a discussion by Starling on some observations made by Edkins (who is not mentioned by Mr. Gray) hardly compensates for giving the credit of Bayliss and Starling's epoch-making discovery of secretin to "Wertheimer and others."

With regard to Mr. Gray's "recent radiographers and others," who "assert that the pylorus during gastric digestion descends naturally below and to the left of the umbilicus," I think that Mr. Gray must have misunderstood Dr. Barclay's references to the work of Pfahler and Holzknecht instead of referring to their original papers. Dr. Barclay will doubtless reply to Mr. Gray himself, so that I shall content myself with quoting from Pfahler and Holzknecht. According to Pfahler,[1] the pylorus is "usually about an inch above the umbilicus," and "the pyloric portion extends from one to two inches beyond the median line to the right," and Holzknecht[2] states that the pylorus is above the umbilicus and "lies in front of or to the right of the spinal column." The figures given in Pfahler and Holzknecht's papers as types of what they regard as normal stomachs bear out this description. The disagreement between various radiographers as to what is the "normal" stomach is simply a matter of terminology. Barclay, Rieder, Holzknecht, and Pfahler all agree as to the shape of the stomach most commonly seen in healthy people, but while Barclay and Rieder think that this shape should be regarded as the normal, Holzknecht and Pfahler think that the "ideal" form, in which the greater curvature does not reach below the umbilicus and the pylorus is on a level with the lowest point of the organ, should be regarded as normal, although they admit that it is comparatively rarely seen.

Our disagreement as to the occurrence of peristalsis in the "cardiac end" of the stomach is, I expect, simply due to a misunderstanding as to nomenclature. Peristaltic waves generally begin near the junction between the upper and middle thirds of the stomach; this point lies in what Cunningham, following His, called the "body" of the stomach, and corresponds probably to what Mr. Gray calls "the distal part of the cardiac portion," which seems to me to be a less convenient term. Mr. Gray apparently believes that these waves at first pass no farther than his "third sphincter," whilst physiologists and radiographers agree that they pass without interruption to the pylorus.

Why does Mr. Gray think that food may pass directly into the duodenum in infants, but only after a considerable delay in adults? I can only imagine that it is because it is easier to observe the process through the small, and therefore more transparent, bodies of infants than through the more opaque bodies of adults. I have watched food (and by food I mean *food*, and not water or albumin water) enter the duodenum immediately after a meal has been taken in a very large number of cases, and any afternoon that Mr. Gray calls at Guy's Hospital I am sure that Dr. A. C. Jordan, our medical radiographer, will be pleased to demonstrate this to him in as many cases as he may desire.

If Mr. Gray thinks that the pylorus requires "at least a little free hydrochloric acid before its sphincter action is unloosened," how does he account for the fact that, according to all writers on this subject, the stomach empties itself with undue rapidity in primary achylia gastrica? In this condition, as well as in almost all cases of carcinoma of the stomach, in nearly all cases of pernicious anæmia, and in many of simple gastritis, free hydrochloric acid is present at no period during digestion, so that the pylorus should never relax and its contents never leave the stomach, if Mr. Gray were correct.

Even if Dr. Barclay disagrees with me as to the position of the pylorus, which I doubt, by what process of reasoning does Mr. Gray conclude from this that Barclay's observations on duodenal ulcer, which are in complete agreement with mine, should not be accepted as confirmation of mine? Our observations prove that the late onset of pain is not due to food being held back by the pylorus or by Mr. Gray's "third sphincter," as we both have found that the food passes into the duodenum with unusual rapidity in cases of duodenal ulcer. The true cause of hunger pain hardly comes within the scope of a discussion on the "motor functions of the stomach." I am, Sir, yours faithfully,

Weymouth-street, W., Dec. 17th, 1910. ARTHUR F. HERTZ.

[1] Journal of the American Medical Association, xlix., 2070, 1907.
[2] Mitteil. aus den Labor. für radiol. Diagn. u. Ther., Vienna, 1906.

ORGANIC PREPARATIONS OF ARSENIC.

To the Editor of THE LANCET.

SIR,—It would be a striking confirmation of the truth of Goethe's admonition, "Warum in die Ferne schweifen, sieh das Gute liegt so nah," were it now to be shown that what is practically our oldest organic preparation of arsenic, introduced into therapeutics 46 years ago by a now forgotten German physician, exhibits the same action on spirochætæ as the recently evolved complicated compound of another compatriot.

Cadet in 1760 obtained a fluid by distilling a mixture of arsenic and potassium acetate; this was known under the designation of Cadet's fluid, alkarsin, or fluid pyrophore. Bunsen, in 1837, first analysed this fluid, and found that it consisted principally of cacodyle and cacodyle oxide, which could be converted into cacodylic acid by oxidation. The first pharmacological experiments with this preparation were undertaken by Bunsen himself on frogs, and by Kürschner on rabbits. The latter found that a dose of 0·42 gramme could be given intravenously without harm; indeed, one animal bore this dose following the administration per os of a dose of 0·36 gramme. In 1843 it was therefore already established that cacodylic acid was non-toxic. In 1860 Schmidt and Chomse confirmed the above statement regarding the non-poisonous character of cacodylic acid, but they found that under certain circumstances it was reduced in the stomach. Lebahn, in 1868, stated that it possessed the action of arsenic, but that it was considerably less toxic than the latter or its salts. Schulz (1879), Marshall and Green (1886) were also able to confirm the above statements; in other words, as far back as 1886 no less than eight authors had published the results of their physiological and pharmacological investigations of cacodylic acid. Jochheim was the first to try the use of cacodylic acid in his practice in 1862, and he published at the time a report of the excellent results he had obtained from its use in the treatment of chronic skin diseases and pulmonary tuberculosis. I recently came across a now forgotten publication of his which bears the date 1865 and is in the possession of the Grand Ducal Court Library here. In this work he says that in his opinion

cacodylic acid exhibits so prompt an action in pulmonary tuberculosis because "it imparts to the blood of the patient a condition which is inimical to the tuberculosis." In my opinion, this is a very interesting statement, especially when we bear in mind that this was long before Koch's discovery or before anything was known about antibodies, antitoxins, and side-chain theory. Between Jochheim in 1862 and Gautier in 1899, many other authors have made contributions to the literature on the cacodylates. Indeed, Peraldis in 1902 in the *Presse Médicale* drew attention to the fact that Gauiier was by no means the first to advocate the therapeutic use of these preparations.

It is an American surgeon who is the first to draw attention to the parallel between cacodyle and "606" in the marked specific action displayed by both, based on his own experience. In the *Journal of the American Medical Association* of Sept. 24th, 1910, Dr. John B. Murphy of Chicago describes the results which he has obtained in the treatment of syphilis with the use of sodium cacodylate, which at first cause one to believe that the paper deals with the remarkable successes attendant on the use of Ehrlich's diamidodioxybenzol, so similar is the effect displayed by both drugs.

Dr. Murphy has been using sodium cacodylate for seven years to allay the pain of metastatic, osseous carcinomata, and also for the various other purposes for which arsenic is indicated. He states that one of its striking therapeutic effects is the rapid dissolution of the deposits in fibrinous pericarditis in children when administered in daily doses of one to three grains or even more. He then proceeds to give an account of his observations following the use of sodium cacodylate in the treatment of syphilis. The usual dose was one to two grains injected hypodermically into the muscles. The effect is remarkable: the spirochætæ disappear completely from the primary chancre in 48 hours, the induration is markedly reduced in 24, and it becomes a soft, clean ulcer in 72 hours. "From that time on it repairs with the same speed as an aseptic sore of mechanical origin would heal in the same tissue. In other words, the sodium cacodylate seems to destroy the specific microorganism (the spirochæta) which is keeping up the irritation." The microscopic examination in one case (illustrated by photographs) showed that the spirochætæ had disappeared within 48 hours from a chancre on the lip contracted from contact with a drinking cup, and following two injections of half a grain each into the pectoral muscle 24 hours apart, while only a clean soft ulcer without induration remained. Thirteen days after the initial treatment the ulcer had healed completely and had left no evidence of the disease. In all, ten injections of half a grain each were made and four injections of three-quarters of a grain. Dr. Murphy states that—

> The adenopathies, except those with suppurating central foci, disappear in four or five days. The mucous patches repair in from twenty-four to forty-eight hours, the advancing ulcers of the palate and posterior wall of the pharynx clear up and heal as healthy granulating wounds in from three to six days and the perforating ulcers of the palate repair in their margins, leaving the perforation in a healthy condition. ..... In a child nine months old with a papillary syphilide, a quarter-grain dose was administered into the pectoral muscle. The rash entirely disappeared in forty-eight hours.

As Dr. Murphy proposes to use the 25 doses of Ehrlich's "606" which he has received in control cases with sodium cacodylate, his results may be awaited with interest; and certainly his suggestion deserves attention to make further trials with a remedy as safe as sodium cacodylate. He suggests that the primary dose should be from two to four grains, and should not be repeated within three or four days. Over diamidodioxybenzol it presents the advantages that it is stable, and its solutions can be sterilised without fear of decomposition, while the injections are practically painless. On the other hand, it is not a proprietary preparation and its pharmacological action is well established.

Sodium cacodylate, $(CH_3)_2AsO_2Na+3H_2O$, is readily soluble in water and contains 46·8 per cent. of arsenium, equivalent to 61·8 per cent. of arsenious acid. As yet its mode of action in the organism has not been clearly explained. By some authors it is assumed that its action is due to its transformation into arsenious or arsenic acid, while others attribute a specific action to the cacodyle molecule, a view supported by the observation of Fraser, who found that no arsenic action followed the internal or subcutaneous administration of sodium cacodylate and that the preparation left the organism unchanged. Heffter, on the contrary, is of opinion that its effect is due to the liberation of arsenic, and found that traces of arsenious acid could be demonstrated in the urine, while certain organs, such as the liver, intestine, and walls of the stomach, have the property of reducing cacodylic acid. This would explain the odour of cacodyle oxide which appears on the internal administration of the cacodylates, but which is generally absent following its subcutaneous exhibition.

The innocuousness of the drug is demonstrated by the fact that there is no mention in the literature of any serious optic derangement or alarming symptoms consequent on its administration during the past 10 years. In view of the recent success in the treatment of syphilis with arsenic, it is of interest to recall to mind that Gautier did not attribute any specific action to arsenic medication, but believed its beneficial action in this affection to be due to its important property of improving the general condition. Oppenheim (*Klinisch-therapeutische Wochenschrift*, 1907, p. 1170) is one of the most recent authors who refer to the use of sodium cacodylate in syphilis, which he regards as preferable to atoxyl and amino-phenylarsenic acid by reason of its lesser toxicity. The preparation has hitherto met with little interest in Great Britain, and it is principally in France and in Italy that it is extensively used. It is now official in the pharmacopœias of France, Italy, and Switzerland.

I am, Sir, yours faithfully,

Darmstadt, Dec. 5th, 1910. GEORGE P. FORRESTER, F.C.S.

THE NATIONAL COUNCIL OF PUBLIC MORALS.

To the Editor of THE LANCET.

SIR,—May we presume upon the sympathy which you have shown towards the National Social Purity Crusade to announce that this organisation will in future be known as the National Council of Public Morals, a title which is more in keeping with the comprehensive educational character of the work, and which we hope will further commend it to the churches, schools, and press of the whole country, and that its offices, through the generosity of Sir W. P. Hartley, will be at Holborn Hall, W.C.

In making this announcement, permit us to add that His Majesty, in kindly accepting a copy of "The Nation's Morals," being the report of our Public Morals Conference held at Westminster last July, graciously says that he fully shares the sympathetic sentiments of His late Majesty King Edward VII. towards this crusade, and that there is no one more anxious than himself to see the state of things (which we deal with) changed for the better.

May we further add, with His Majesty's knowledge, his message to the Convocation of York—"The foundations of national glory are set in the homes of the people. They will only remain unshaken while the family life of our nation is strong, simple, and pure"—will be the motto of the National Council of Public Morals. They express in most felicitous terms the object of this movement, of which the Lord Bishop of Durham is President for 1911.

We remain, Sir, yours faithfully,

WILLIAM SINCLAIR,
Chairman.
F. B. MEYER,
Vice-Chairman.

National Council of Public Morals, Holborn Hall, W.C., Dec. 19th, 1910.

A POINT IN CHOLELITHIASIS.

To the Editor of THE LANCET.

SIR,—Three months ago, with the help of Dr. John Morton and Dr. R. Home Henderson, I operated on a gall-stone case. There was nothing out of the ordinary in the conditions present except the number of calculi found. There was one marble-sized, round, almost encapsuled stone, with 796 others, small, cuboid, facetted. A week after operation three small ones came from the wound, making in all 800. I looked up Mr. Mayo Robson's book on "Diseases of the Gall-bladder and Bile-ducts" (second edition, 1900), and found that he had taken 720 from one of his cases.

Can any of your readers furnish me with, or direct me

where to procure, details of cases with as large or larger numbers removed by operation?

I am, Sir, yours faithfully,

Glasgow, Dec. 14th, 1910. DUNCAN MACARTNEY.

A QUESTION UNDER THE WORKMEN'S COMPENSATION ACT.

To the Editor of THE LANCET.

SIR,—I give a note (certificate) to a man with a "beat knee" dated Dec. 1st. Certifying surgeon comes along when he pleases, not when asked, at least not as early as he could have come. He dates certificate of suspension Dec. 8th, the day he saw patient, but puts in the suspension certificate that patient has suffered since Dec. 1st. How do the owners pay compensation—from my date, Dec. 1st, or certifying surgeon's date, Dec. 8th?

I am, Sir, yours faithfully,

Dec. 14th, 1910. SIMPLEX.

*** The employers are liable to pay compensation from the date of disablement, which for the purposes of Section 8 of the Workmen's Compensation Act, 1906, "shall be such date as the certifying surgeon certifies as the date on which the disablement commenced" (Section 8, Subsection 4). This assumes the incapacity to be of more than two weeks' duration. We are not of the opinion that our correspondent has any cause of complaint against the certifying surgeon, as his letter seems to suggest, and we think he will find the certificate, which is not before us, is one of disablement not of suspension, following the form (Form 3) laid down by the Secretary of State, and rightly giving the date of the certifying surgeon's examination, as well as that which he has been able to fix as the date of disablement.—ED. L.

MALARIA IN ITALY IN 1909.

(FROM A CORRESPONDENT.)

THE "Società per gli Studi della Malaria" in its report for the year 1909 calls attention to observations in Algeria by the brothers Sergent and by Polettini, Memmi, and Pozzilli, proving once more the existence of carriers of malaria. Persons were found who had malarial parasites, even parasites of the æstivo-autumnal variety, in their blood, without showing the slightest febrile reaction. These apparently healthy carriers, some of whom were children and some adults, are most dangerous from the epidemiological standpoint, forming reservoirs, as it were, very difficult of detection, from which the new epidemical torrent emerges. Add to these the chronic cases of latent infection and the links connecting one epidemic season with another become evident. No simple easy method of detecting such cases has yet been discovered.

Besides the ordinary pre-epidemic recrudescence of recidivous cases there has been observed a recidivity which is of a more prolonged type and may be called periodic, recurring in the years of epidemic recrudescence. It has not been possible to trace any relation between the number of anopheletes or between the meteorological conditions and the periodic recrudescences; rather it would seem that these are regulated by biological causes such as this periodic recidivity and by a loss of the immunity conferred by previous attacks. As regards prophylaxis, the report has again to lament a diminution in the quantity of State quinine consumed in the past financial year, 1909–10, to the extent of nearly 2000 kilogrammes upon that of 1908–09, which in its turn showed a diminution of 715 kilogrammes upon that of 1907–08. Associated with this diminished use of quinine there has been an increase of malaria in nearly all those provinces where such diminution has taken place. The following table gives the figures since 1902 (when the use of State quinine was begun) relating to the consumption of quinine and the mortality from malaria. The mortality for only the first half of 1909 is available. It shows a total diminution, however, of 949 deaths on that of the corresponding period of 1908.

Consumption of State quinine.		Mortality from malaria.	
Financial year.	Kilogrammes sold.	Year.	Total deaths.
—	—	1900	15,865
—	—	1901	13,558
1902–1903	2,242	1902	9,908
1903–1904	7,234	1903	8,513
1904–1905	14,071	1904	8,501
1905–1906	18,712	1905	7,838
1906–1907	20,723	1906	4,871
1907–1908	24,351	1907	4,160
1908–1909	23,635	1908	3,463
1909–1910	21,665	1909	—

Besides the fall in mortality there is a noticeable absence of the great periodic oscillations in the mortality curve which characterised it in the year preceding the date of State-supplied quinine. The fall is still more evident in the statistics of Latium, Southern Italy, and the islands where, before it was supplied gratuitously, quinine was beyond the reach of the greater part of the population. Further, whereas prior to 1902 the malaria mortality and the general mortality were subject to the same variations and fell at about the same rate, after that date the former made a precipitous descent, leaving the latter at the comparatively high level which it still maintains.

Unfortunately, the same cannot be said of the *morbidity* rate for malaria, which, in some regions especially, still remains very high, doubtless because of the neglect of the prophylactic as compared with the therapeutic use of quinine. An experiment carried out at Vigasio in 1909 strikingly confirms this explanation. All adults in that place who had been attacked during the previous season by malaria were carefully treated with quinine for the last 50 days of the pre-epidemic, as well as during the whole epidemic period of 1909, the rest of the population, with the exception of 132 children who also received prophylactic treatment, not taking any quinine as a preventive. An epidemic of primitive infections nevertheless broke out, affecting 17·3 per cent. of adults and only 12·7 per cent. of all children (who it is well known are the more susceptible), while not one of the 132 children prophylactically treated was attacked. The value of the prophylactic method was also abundantly shown in the "demonstration camps" organised both in Italy and abroad in connexion with the army, the schools, the mines, the country estates, and the agricultural population of the Agro Romano and Pontine Marshes, among all of whom only a very small fraction contracted malaria. The doses of quinine administered for the purpose of prophylaxis (amounting sometimes to 10 or 12 grains daily) have proved uniformly innocuous. In the case of children it is given in the form of chocolates of tannate of quinine in doses of 2½ grains and upwards daily, according to age, and far from harming them is found to act as an excellent tonic. When practicable the use of wire gauze has been continued, with the same good results as formerly. In such a country as Italy, with but limited means at its disposal, no attempt has been or can be made with any hope of success to attack malaria by the destruction of the anopheles.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool University: The Dutton Memorial Professorship of Tropical Entomology; the Lectureship in Operative Surgery.

IN 1905, it will be remembered, the late Dr. J. E. Dutton lost his life in the Congo from spirillum fever, a disease which he, together with the other members of the twelfth expedition of the School of Tropical Medicine, were investigating. He succumbed after a short illness. In view of the many great services that Dr. Dutton had rendered to the investigation of tropical medicine, although he died at the early age

of 28, the Liverpool School of Tropical Medicine set about collecting a sufficient sum of money to endow a professorship in the University of Liverpool in connexion with tropical medicine to commemorate the sacrifice of his life. The movement has now reached completion, and the school has been able to offer the University the sum of £10,000 for the establishment of a chair in tropical entomology, which has been gratefully accepted. This makes the second chair given to the University by the Liverpool School of Tropical Medicine, the first being the "Sir Alfred Jones chair in Tropical Medicine." The Liverpool School of Tropical Medicine, under the guidance of its new chairman (Mr. W. H. Lever), continues to receive valuable support on all sides, and has had this last term a record number of students.—Mr. Keith W. Monsarrat, the dean of the Faculty of Medicine, has been selected for the new lectureship of operative surgery in the University.

Liverpool Education Committee and Defective Vision in Children.

The education committee has adopted the following resolutions in regard to the testing of the eyesight of children attending the elementary schools who are reported by the school medical officers to have defective vision and whose parents are found to be unable to defray the cost:—

1. That every such child shall receive a voucher to be redeemed at the price of 3*s.* if signed by a registered medical practitioner recognised by the local education authority for this function.
2. That a list be prepared of such hospitals and registered medical practitioners as the sub-committee considers to be properly equipped for such work, and as have expressed their desire to undertake it.

These resolutions are open to serious objection in that refraction work, especially in the case of children, requires considerable training, so that the fee is quite inadequate to the time and skill demanded. Why should Liverpool offer less than the Liscard education authority, or the Bangor county council? Both are paying at the rate of 21*s.* per four cases dealt with, the work being done by surgeons of special equipment.

Dec. 19th.

BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Trypanosomiasis and the Cinematograph.

THE latest meeting of the Bristol Medico-Chirurgical Society was marked by a departure from the ordinary course of events. The evening was devoted to a lecture on trypanosomiasis by Captain F. P. Mackie, I.M.S., an old Bristol student and a member of the Royal Society's Sleeping Sickness Commission. The meeting was held in the new chemical theatre of the University, by kind permission of Professor F. E. Francis, and there was a large attendance. The lecture was illustrated by microscopical specimens and by an admirable series of lantern slides; and it was followed by a remarkable cinematographic demonstration of trypanosomiasis experimentally induced in the rat, the films used being prepared and exhibited by Pathé Frères of London and Paris. Dr. M. Nierenstein, a member of the chemical staff of the University, whose work on atoxyl and allied bodies is well known, also spoke.

Long Fox Lecture.

On Dec. 15th the sixth Long Fox lecture was delivered to an interested audience in the medical library of the University of Bristol by Professor J. Michell Clarke, the Vice-Chancellor being in the chair. The subject chosen was Cerebro-spinal Syphilis. The lecturer's wide experience of neurology gave a personal note of authority to the discourse, which included remarks on the parasyphilitic processes, the gummatous and arterial lesions of the brain and cord, and on syphilitic affections of the meninges. A number of interesting lantern slides served to illustrate the lecture. The previous lecturers have been Dr. John Beddoe, F.R.S., Dr. R. Shingleton Smith, Dr. P. Watson Williams, Mr. J. Herbert Parsons, and Professor Edward Fawcett.

George Allen Norman, M.B. Oxon., L.R.C.P., L.R.C.S. Edin.

The funeral of Dr. G. A. Norman took place at Ipplepen, Devon, on Dec. 15th, in the presence of a large gathering. Dr. Norman, who received his medical education at St. George's Hospital and Oxford University, graduated M.B. of Oxford in 1870, after having qualified L.R.C.P. and L.R.C.S. of Edinburgh during the previous year. Dr. Norman in his younger days was a good athlete and a successful competitor at the United Hospitals' athletic sports in London. He was at one time surgeon to the Monmouth and County Hospital. Dr. Norman practised for many years in California and came to Ipplepen about seven years ago. He was very highly esteemed in Ipplepen and the district, and much regret is felt there at his death.

South Devon and East Cornwall Hospital, Plymouth.

As a result of the Hospital Sunday collections which took place at Plymouth on Oct. 23rd, the sum of £755 has been handed to the treasurer of the South Devon and East Cornwall Hospital.

The Falmouth (Cornwall) Board of Guardians and Tuberculosis.

At the meeting of the Falmouth board of guardians, held on Dec. 15th, a special committee reported in favour of urging the Local Government Board to make the notification of pulmonary tuberculosis compulsory in Cornwall, and suggested that the question of the establishment of a sanatorium for tuberculosis for the county should be pressed forward.

Dec. 19th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Honour for Scottish Universities.

THE King has been pleased to command that the three ancient Scottish Universities of St. Andrews, Glasgow, and Aberdeen shall be included amongst the representative bodies having the right of personal access to the Throne for the presentation of addresses. This honour has hitherto only been held by the General Assembly of the Church of Scotland, the corporation of the City of Edinburgh, and the University of Edinburgh, whose representatives are invariably received by the Sovereign when presenting addresses of loyalty.

Teachers' Recommendations re Inspection of Children.

The committee appointed by the Glasgow Local Association of the Educational Institute of Scotland with reference to the medical inspection of school children reports that the methods of conducting the inspection in Edinburgh, Renfrewshire, Dumbartonshire, and Stirlingshire, Glasgow, Govan, and other parts of Lanarkshire, have been carefully considered. These methods differ very considerably even in the same county, and accordingly the committee recommends that: (1) The ordinary work of the school should not be interfered with by excessive demands on the teachers' time; (2) the educational work of the teachers should not be brought into disrepute by requirements which may lead to conflicts with the parents; and (3) duties requiring medical skill, however simple, should not be imposed upon the teachers. The committee further suggests that teachers may reasonably be asked to (*a*) forward to the medical officer or local education authority the names and addresses of the children to be examined; (*b*) distribute, by means of the children, notices to the parents informing them of the date of the medical inspection; and (*c*) supply such particulars respecting each child to be examined as are contained in the ordinary school records—e.g., regarding regularity of attendance, &c. It is also suggested that teachers should not be required to (*a*) fill up and sign notices to the parents regarding the necessity of future advice or treatment; (*b*) measure and weigh children; (*c*) test children's eyesight, examine their teeth, or examine them for vaccination marks; (*d*) enter on school cards details respecting state of clothing, footgear, cleanliness, nutrition, speech, mental condition, work outside school hours, parent's occupation, size of house, &c.; (*e*) dress and undress the children during the inspection; (*f*) fill in doctor's observations in the cards as inspection proceeds; and (*g*) enter all details of cards in duplicate in a schedule or register.

Death of Dr. James Maxwell of Tobermory.

The death took place at Campbeltown last week of Dr. James Maxwell, who for many years was medical officer of Tobermory, which post he was obliged to resign a short time

ago owing to failing health. Dr. Maxwell was born in Glasgow and was educated in Campbeltown. He studied at the University of Glasgow and shortly afterwards was appointed medical officer of the parish of Tobermory. During his long residence there he took a deep and active interest in the affairs of the parish, being a member of the school board and an officer in the Argyll and Bute Artillery, and being also identified with other organisations. He was very popular in the Island of Mull and was held in the highest esteem in the circles in which he moved. Dr. Maxwell at the time of his death was 54 years of age and was unmarried.

Treatment of Consumption in Aberdeen.

On Dec. 14th, at a meeting of the public health committee of the Aberdeen town council it was agreed, on the recommendation of Dr. Matthew Hay, medical officer of health, to open one of the reconstructed and extended pavilions of the Aberdeen City Hospital for the treatment of pulmonary tuberculosis. This will be done as soon as the new heating arrangements are completed. In his report Dr. Hay states:—"According to the recognised standard of one bed per 1000 of population, the whole accommodation of the City Hospital, as recently extended, is scarcely more than is necessary to meet the requirements of ordinary zymotics, if they are to continue to be removed to the hospital in as liberal proportions as in the past; but owing to great fluctuations in their prevalence there are considerable stretches of time within which some of the wards stand unused. With this in view I suggested to the committee, when engaged in planning the additions, that one of the reconstructed and extended pavilions should be so arranged as to make it convenient and suitable for the treatment and care of cases of pulmonary tuberculosis or consumption. These arrangements are such that they will not interfere with the use of the pavilion at other times, for ordinary zymotic cases, when epidemics of the highly infectious and dangerous diseases demand it. ..... It is an educational gain that the treatment of the cases will be carried out in a hospital which is easy of access and is visited twice a week by large numbers of the relatives of patients. The tuberculosis wards will be a constant object-lesson. The pavilion, with its two main wards and four small wards, is capable of accommodating 32 to 36 adult patients, and there is no reason why a few cots should not be placed in each ward for the treatment of non-surgical cases of tuberculosis in children."

Hospital Accommodation at Aberfeldy.

Arising out of an inquiry by the Local Government Board as to the views of the burgh medical officer (Dr. J. Mackay) in regard to the hospital accommodation for infectious diseases in the burgh, the medical officer reported at a meeting of Aberfeldy town council on Dec. 12th, that in his opinion it would be more satisfactory if the burgh local authority erected a small hospital for its own use; but failing its doing this, the next best thing to do was to send the patients to Perth, and if the authority continued to adopt this course he suggested procuring an ambulance wagon for the burgh. The town clerk was instructed to make inquiries regarding the purchasing of a second-hand wagon.

Dec. 19th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Fellows of the Royal College of Surgeons in Ireland.

A SPECIAL meeting of the Royal College of Surgeons was held recently on the requisition of a number of the Fellows. A resolution was adopted recommending the Council to limit the appointment of examiners to Fellows of the College. At present examiners must be Fellows or teachers in a recognised school of medicine. This resolution, if carried out by the council, will exclude several teachers in the schools from being appointed examiners.

The Chair of Midwifery in the School of Physic.

Last year when proceeding to elect to the chair of midwifery in the School of Physic, the Royal College of Physicians invited each candidate to state whether, if elected, he would resign the chair if he should become master of a maternity hospital. The candidates had no choice but to assent, and in consequence Dr. H. Jellett, who was elected, and has recently become Master of the Rotunda Hospital, has now resigned the chair of midwifery. A successor will be elected in March, and in the meantime Dr. Jellett has been invited to continue his course of lectures. The condition imposed by the College has roused some criticism.

Conference of Poor-law Guardians.

It was perhaps owing to interest being centred on the General Election that the attendance at the Conference on Poor-law Reform held recently at the Mansion House, Dublin, was very small. The conference was summoned by the Irish Workhouse Association, of which the Earl of Mayo is president, and all the boards of guardians in the country were invited to send delegates. As a matter of fact, out of some 150 boards only 11 were represented. Resolutions to the following effect were passed:—

That the county should be the area for which special institutions for the sick and aged should be maintained, and the cost should be paid out of the county and county borough rates.

That the duty of making suitable provision for the feeble-minded should be an imperial charge.

A motion approving of certain proposals in the report of the Vice-Regal Commission in preference to those of the Royal Commission fell to the ground, the numbers of those voting on each side being equal.

The Women's National Health Association.

The annual meeting of the Dublin branch of the Women's National Health Association was held last week in the Royal College of Physicians. The annual report stated that the branch had now completed three years of work. The branch employed two nurses to visit patients suffering from tuberculosis to advise as to precautions against infection, and gave help in other ways. The pasteurised milk depôt was selling between 35 and 40 gallons of milk a day, and 82 babies were at present being supplied with such milk. A babies' club was founded a year ago and was at present attended by about 20 mothers with their babies. They got instruction in sewing, cooking, and the care of children generally. Once a week the babies were medically examined and advice given to the mothers. Nurses also visited the babies at their homes. The branch was also organising a corps of visitors in connexion with the Early Notification of Births Act, which had been recently adopted by the corporation of Dublin. Steps were being taken to organise "tuberculosis classes" on the lines of those conducted by Dr. Pratt of Boston. Lady Aberdeen presided.

The Department of Agriculture and the North Dublin Sanitary Authority.

For some months past a prosecution has been pending against the Department of Agriculture by the North Dublin rural council as sanitary authority of the district in which the model farm of the Department is situated. It appears that in the farmyard a heap of manure is placed in closer proximity to the cowsheds than is allowed by the regulations of the rural district council, and after repeated warnings the council finally prosecuted the manager of the farm. The Department set up the defence that the manure was in its proper position, that it was not too close to the cowsheds, and that its removal to any other site would be impracticable. In fact, as a lesson in farm management to the country at large the manure was declared to be in the only suitable position. On a first hearing the bench of magistrates was equally divided, and the council then withdrew the prosecution.

Medal for the Countess of Aberdeen.

The Countess of Aberdeen has received the medal of the International Association for Medical Instruction, conferred in recognition of the campaign against tuberculosis in Ireland.

Dr. C. J. Clibborn, J.P.

Last week, in the City Hall, Belfast, Dr. C. J. Clibborn, late medical inspector of the Local Government Board, who has recently retired under the 65 years age limit, was presented by the dispensary medical officers of the Belfast area with a very handsome solid silver salver inscribed as follows:—

Presented to Cuthbert J. Clibborn, M.D., J.P., on his retirement from the position of Medical Inspector, Local Government Board, with the best wishes of the members of the Dispensary Medical Staff of Belfast Union, and in recognition of the marked ability, courtesy, and consideration which he invariably displayed in the discharge of the duties of his office; 12th December, 1910.

The autographs of the 17 members of the dispensary medical

staff surround the inscription, which occupies the centre of the salver. At the meeting in the City Hall Mr. S. B. Coates presided, and complimentary speeches were delivered by the chairman, Mr. C. J. Milligan, Mr. H. D. Osborne, Dr. Robert Thomson, J.P. (chairman of the Belfast public health committee), Mr. H. W. Bailie (medical officer of health), and Mr. R. Meyer (town clerk of Belfast). Dr. Clibborn made a very feeling reply of thanks.

The Forster Green Hospital, Belfast.

At the opening meeting of the Belfast division of the British Medical Association for this session, held in the Medical Institute, Belfast, on Dec. 15th, the chairman, Dr. John Simpson, in his introductory address, gave a most interesting account of the origin and evolution of "the Forster Green Hospital for Consumption." A discussion followed on Tuberculosis, each speaker being limited to seven minutes. The following took part:—Professor T. Sinclair, Tubercle of the Serous Membranes; Sir John Byers, Tubercle in Relation to Pregnancy; Dr. W. Calwell, Susceptibility from a Clinical Standpoint; Dr. H. L. McKisack, Value of Physical Signs in the Estimation of a Lesion; Mr. A. B. Mitchell, Tubercle of the Stomach and Duodenum; Dr. Thomas Houston, Laboratory Diagnosis and Treatment; Dr. C. E. Shaw, Tubercle of the Larynx and Eye; and Mr. A. Fullerton, Tubercle of the Kidney. The chairman, in bringing the discussion to a close, spoke of the great value and interest of the work brought forward at that meeting.

Dec. 19th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Action of Ultra-violet Rays on Tuberculin and on Anti-tuberculous Serums.

AT a recent meeting of the Biological Society M. Jousset said that the experiments of M. and Mme. V. Henry and of M. Baroni seemed to show that Koch's tuberculin was destroyed by prolonged exposure to ultra-violet rays. In reality the tuberculin was only rendered inactive; it lost its toxic properties, but retained the whole of its specific precipitating power with respect to the blood serum of immunised animals. This fact added another to the already existing proofs of the extraordinary power of tuberculin to resist destruction. On the other hand, antituberculous serums soon underwent important modifications under the influence of the same rays; the specific precipitating power disappeared in a few minutes, and in the course of some hours the serum became viscid and formed a jelly. This was, in the opinion of M. Henry, a change common to many colloid bodies. Moreover, when the irradiation was pushed a little further serum which had been rendered colourless by dilution assumed a dirty yellow tinge similar to that of serums which had been left in diffused daylight for many years. In this case it behaved as if it contained a true chromogenic substance.

Action for Damages against a Surgeon.

In these columns on Dec. 10th, p. 1731, I mentioned that Dr. Bazy had been ordered to pay 5000 francs damages to a female patient in whose abdomen he had inadvertently left two compresses measuring 1 metre in length and 30 centimetres in width. He immediately appealed against this decision, and has also brought the case before the Society of Hospital Surgeons, asking the society to consider whether it was possible—even on the hypothesis that the compresses had been forgotten in a cyst—for the cyst to become ulcerated, to set up ulceration of the intestine, and to allow the escape of two compresses of the dimensions above stated without ever producing any symptom of fæcal fistula. Such a sequence of events would imply the immediate formation of a permanent cicatrix, but of this the experts had not been able to find any trace. In the next place Dr. Bazy told the society that this decision would form a precedent which, by giving opportunities for blackmail, would threaten the independence of the profession every day, and that it would enable unscrupulous persons to live at the expense of surgeons. He also suggested that the society should take the requisite measures, and if necessary should enter into communication with the Government, so that surgeons might not be harassed in the practice of their profession. In the result the society decided to appoint a committee to consider the question.

The Age for Retiring from Practice.

Last January a collision occurred between a motor vehicle and the carriage of Dr. Cheurlot, who was seriously injured and for nine months unable to visit patients. The chauffeur of the motor vehicle was fined 50 francs, and the matter afterwards came before a court of law for the purpose of deciding on the damages to be paid to Dr. Cheurlot. He claimed 220,000 francs, of which 10,000 francs were assigned for medical attendance and medicine, 60,000 francs for the lost time during which he had not seen patients, and 150,000 francs for prospective diminution of his practice on account of his confinement to the house and his present condition of weakness which did not allow him to work as he had formerly done. The court awarded him only 60,000 francs, at the same time remarking that when medical men reached Dr. Cheurlot's age of 68 years, after a long, honourable, and prosperous career, most of them were desirous of taking their well-earned rest and of being less burdened with the fatigues of practice.

The Prix Lannelongue.

The Surgical Society has just awarded the Prix Lannelongue to Sir Victor Horsley of London. This prize is given every fifth year, without distinction of nationality, to the surgeon who has during the previous ten years accomplished the best surgical work.

A New Method of Extension in Fractures of the Limbs.

At a meeting of the Society of Paris Surgeons M. Dupuy de Fenelle showed a new apparatus for maintaining extension of the limbs by Steinmann's method. It was provided with two long points for deep insertion into the lower extremity of the bone for which lengthening was required. These two points slid on a bar and could be brought nearer to one another by means of two screws, an arrangement which allowed them to be introduced by degrees without using force; two rings carried the cord by which traction was made. This apparatus enabled continuous traction to be kept up in fractures complicated with much comminution. In more than 50 cases treated in foreign countries it has been employed for the correction of shortenings of a limb amounting to 8 or 10 centimetres. The use of this apparatus was indicated whenever other methods had failed. It was more simple than a cutting operation and could be applied under local anæsthesia.

Dr. Doyen's Dispensary.

At the conclusion of a course of lectures on immunity which he has delivered at the Hôtel des Sociétés Savantes Dr. Doyen announced that he is opening a free dispensary where all patients provided with cards from the *bureau de bienfaisance* of the city of Paris will receive treatment for tuberculosis and other infectious diseases, whether acute or chronic. Dr. Doyen has already been treating patients by his immunisation method for the last three years, and during that time 30,000 tubes of liquids for injection have been supplied to 900 medical men in the country districts and abroad who have treated 1020 patients, many of them being in an advanced stage of their illness. The general statistics show the following results for pulmonary tuberculosis in each of the three stages: in the first stage, 60 per cent. of recoveries in three months and 35 per cent. of cases improved; in the second stage, 25 per cent. of recoveries in six months and 60 per cent. of cases improved; and in the third stage, 8 per cent. of recoveries in six months and 60 per cent. of cases improved.

Dec. 19th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Death of Professor Franz König.

Professor Franz König, formerly professor of surgery at the Universities of Göttingen and Berlin, died in Berlin on Dec. 12th at the advanced age of 78 years. His last illness was of only a few days' duration, the cause of death being pneumonia. He became, after the death of Professor von Esmarch, the oldest of the German surgeons and one of the few who had been professors of surgery before the era inaugurated by Lister. He was born in 1832 at Rotenburg-on-Fulda, where his father held the appointment of medical attendant to the landgrave. He took

the degree of M.D. in 1855 at the University of Marburg and passed the State examination in the following year. After having held for a short time an assistantship at the medical clinic of that University, he went to Berlin for post-graduate study under the celebrated Professor Langenberg and the ophthalmologist, Professor Graefe, and in 1858 he became an assistant to Dr. Roser, professor of surgery in the University of Marburg. In 1860 he settled in Hanau as a medical officer of health, and at the same time became a surgeon to the hospital of that city. There he published a good many observations on clinical cases and on new operative methods, especially on wounds of the lungs, on stenosis of the rectum, and on tracheotomy for croup. His greater work, however, was on resection of the joints, which made him so well known in the surgical world that he was invited to become ordinary professor of surgery at the University of Rostock, where he remained till 1875, with only a short interruption, caused by the Franco-German war. In 1875 he was appointed ordinary professor of surgery at Göttingen, and resided there until 1895, when he was invited to succeed the late Professor Bardeleben at the University of Berlin. In 1904 he resigned his professorship and retired to Jena, afterwards returning to Berlin. Notwithstanding his great age he continued to attend the meetings of medical societies and to take part in the discussions. Professor König was the author of a large text-book of surgery, which was first published in 1876. This standard work, which was always kept up to date by the author, and of which the eighth edition has recently appeared, has been translated into several languages and has made the name of Professor König widely known.

Ehrlich's New Remedy "No. 606" in Internal Diseases.

At a recent meeting of the Verein für Innere Medicin Professor Michaelis read a paper on the administration and effects of Professor Ehrlich's new remedy "No. 606" in internal diseases. He said that he preferred to give it by intravenous injections and had employed this method in 35 cases. The injection was usually followed by slight shivering, and sometimes there was a rise of the patient's temperature for one or two days. This mode of administration was absolutely painless, whilst intramuscular injection caused severe pain and great infiltration. When given intravenously this substance was absorbed at once and was also eliminated rather quickly—namely, in from three to four days—but after intramuscular injection it remained a long time in the body. A toxic action did not occur in healthy persons, but patients weakened by an illness of long duration were liable to have their symptoms aggravated under the treatment; disorders of metabolism, heart disease, and acute Bright's disease were therefore contra-indications as regards this substance. A syphilitic patient could not be completely freed from the disease by a single injection; the injection must be repeated, and this must be done even although the Wassermann reaction has proved negative after the preceding injection, because it will very likely become positive in the course of a short time. An intermittent treatment must be adopted on the same principle as in treatment by mercury. Ehrlich's remedy has proved itself superior to mercury and iodine because of its quicker action; this was especially important in cases of gumma of the trachea, the liver, and the kidneys, in which it was essential that the threatening symptoms should disappear at once, leaving the systematic treatment of the patient for subsequent consideration. No benefit could be expected from the administration of "606" in cirrhosis of the liver, aneurysm, and amyloid degeneration, but it might be tried in syphilitic arterio-sclerosis. Cases of syphilitic periostitis and arthritis which had resisted treatment with mercury and iodine, often became better after an injection of "606," and the severe nocturnal pains might disappear. With regard to syphilitic affections of the central nervous system, Professor Michaelis stated that syphilis of the brain improved rapidly in certain cases; the vomiting stopped and the gait became less jerky. It was advisable to administer first a comparatively small dose to such patients, and to repeat it in from four to six weeks. He had treated 18 cases of tabes, the result being that the lancinating pains and the ataxy were frequently relieved for a period varying from two to four months, but reappeared afterwards; perhaps a second injection after that time would again be efficacious. In general paralysis he had seen one case in which there was a prompt remission persisting for three months, and after another injection the symptoms were again improved. In the discussion Professor Oppenheim pointed out that "606" was undoubtedly efficacious in syphilitic affections of the cerebro-spinal system, but not more so than mercury and iodine. In tabes the patient's general state sometimes became better and the pains diminished, but he had also observed an aggravation of the symptoms.

Dec. 19th.

BUDAPEST.

(FROM OUR OWN CORRESPONDENT.)

The Improvement of Hygienic Conditions in Hungary.

THE cholera epidemic of this year has taught our Government a very useful lesson by showing that we were quite unprepared to deal with a serious epidemic, if such a one had occurred. Fortunately, however, the cases were mild enough not to claim too many lives. It is to be regretted that the bulk of our population pays little attention to the laws of hygiene. The young people learn elementary hygiene in the intermediate schools, and consequently believe in the infectious or contagious nature of some diseases, but the older men, and especially the women, cannot be persuaded of the necessity for disinfection. In some parts of the country the sanitary officials are regarded with so much disfavour that in a Hungarian village the medical officer, while engaged in disinfection, has even had to carry a loaded pistol in his hand. The National Public Health Committee has given instructions for the delivery of popular lectures on infectious diseases, their spread and their prevention, and on the advantages of disinfection. These lectures will be continued throughout the winter, because it is then that the rural population is most likely to have leisure for attendance at them. The ignorance of the peasantry with regard to these matters may be imagined from a description given by a village medical officer, who stated that public addresses on the methods of recognising and preventing cholera were delivered by him in all the villages throughout his district. Some of these villages were inhabited chiefly by Roumanians, of whom not less than 97 per cent. were quite illiterate. In such places the local magistrate, the clergyman, and perhaps one or two other persons presented themselves and laughed at him for advising them to wash their hands before meals, to wash their mouths, and to ventilate and whitewash their rooms. He, however, had a better reception in Hungarian or Schwabisch (German) villages, where his discourses were attended by a fairly large number of peasants, who were capable even of discussing some questions relating to public health. The report of this village medical officer led to the asking of a question in the Parliament, where the Minister of Instruction gave a conciliatory answer, saying that he would increase the number of elementary schools by about 100 per cent., and that he would enforce the regulations making school attendance compulsory. Should this promise be fulfilled the Roumanian villagers who have made their homes in Hungary will in course of time learn that they erred in drawing their knives and threatening to murder the medical officers if children suffering from scarlet fever were conveyed to an isolation hospital. A distinct advantage resulting from the cholera outbreak is that the towns and villages will be provided with good drinking water. In the Government Budget for next year several hundred thousand kronen are allotted for boring artesian wells in villages. Along the Danube hundreds of villages use river water for drinking purposes, and will consequently, in the event of an epidemic, be in danger of infection. The position of the village medical officers will also undergo considerable alteration in consequence of the cholera. Along the banks of the Danube the epidemic attacked many villages, where there had been no medical officers for a long time—in some places not even for many years. This is due to the very low salary given by the villages. The people expect that a man who has studied medicine for several years and been put to great expense before getting his diploma will settle in a village for the ridiculously small sum of 1000 kronen (£40) a year. Dr. Naday, writing in a recent issue of the *Orvosok Lapja*, says that more than 700 village medical officerships are vacant, and that in the event of a serious epidemic breaking out there would not only be great loss of life, but more money would be wasted than the payment of all the village medical officers for a decade would amount to. Dr. Naday's open letter was read by the authorities concerned, and a

response soon came in the form of a statement by the Minister of Internal Affairs to the effect that in the near future the medical officers in all the villages will have not only a uniform salary paid by the State, but also a fair pension. The minimum payment made by the State will be 2400 kronen (£100), rising by £20 every five years, and besides this fixed payment the villages will have to contribute in proportion to the number of their inhabitants. As an example of the popular feeling on this question, it may be mentioned that some comparatively wealthy villagers complained recently in a newspaper that they could not get rid of their medical officer, who was 83 years of age, and naturally incapacitated for work. They did not ask the county council to pension off this old practitioner, they merely asked the council to relieve them from continuing to pay his salary.

Tolstoy's Physician.

In their obituary notices of the distinguished Russian writer Tolstoy, the newspapers have mentioned, with regard to his enthusiastic adherent, Dr. Dusan Makoviczky, little more than that he was Tolstoy's family medical attendant and private secretary. In the issue of the *Journal of the Hungarian Medical Association* for Dec. 1st, 1910, Dr. Alexander Androvich, a personal friend and schoolfellow of Dr. Makoviczky (who, by-the-by, is a Hungarian by birth), gives some interesting details of his career as follows:—"Dr. Makoviczky practised in the 'nineties' at Zsolna in Upper Hungary, being then from 28 to 30 years of age. He was of middle size and slender build, with fair hair and beard, and blue eyes. He seemed to be a blend of the Slav and German type. Under an apparently morose exterior there dwelt in him a very mild and noble soul. He was spoken of in Zsolna as the 'curious eccentric.' He did not ask for fees either from rich or from poor, and it was only in exceptional cases that he could be induced to accept a modest payment. He gave the poor patients money, food, and medicines, as, in fact, he could afford to do, because his father was a very rich man, whose wealth was derived from cheese-making in Lipto, also in Upper Hungary. Dr. Makoviczky was highly educated. When only 25 years of age he was invited to become the first assistant at the surgical clinic at Innsbruck, but he declined the offer. He could give no reason why he refused this advantageous position; it seems that it was caprice. During the few years of his stay in Zsolna premonitory signs of his enthusiastic admiration for Tolstoy could be noticed. At this time he began to write in the Slav language pamphlets, the tendency of which was to combine scientific and idealistic Socialism; in a short time he began to approach the so-called 'Tolstoyism.' On account of his pamphlets he was prosecuted on a charge of Panslavism, but was acquitted after giving a satisfactory explanation of his views. He suddenly left Zsolna, and I did not hear anything about him until 1903, when Tolstoy's health was failing and the newspapers mentioned the name of Dr. Makoviczky as his medical adviser and intimate friend. No reference, however, was made to his Hungarian origin, and this fact was not known in Russia either, until a Hungarian reporter intending to interview Tolstoy was, to his surprise, addressed in Hungarian by the secretary. Dr. Makoviczky lived with Tolstoy for about seven or eight years." In conclusion, Dr. Androvich expressed his conviction that Tolstoy would never have a more enthusiastic admirer than Dr. Makoviczky has been.

Dec. 19th.

LONDON (ROYAL FREE HOSPITAL) SCHOOL OF MEDICINE FOR WOMEN.—The council have received the following sums towards the repayment of the building debt: The Goldsmiths' Company, £100; the Mercers' Company, £52 10*s.*; Miss S. A. Turle, £200; F. C. N., £52 10*s.*; the late Mrs. Isabel Thorne, £50; Dr. May Thorne, £50; F. C. T., £50; Sir Charles Burt, £10 10*s.*; collected by Mrs. Starling, £74 1*s.*; and smaller sums amounting to £10 10*s.* The council has appointed Miss N. Laycock, B.Sc., to be demonstrator in biology, and Miss I. Pendlebury, B.Sc., to be demonstrator in physics for 1910–11. The St. Dunstan's Exhibition of £60 a year for three years has been awarded to Miss Lilian A. Clark of the City of London Girls' School, and the School Scholarship of £30 to Miss C. I. Fox of the Mount School, York, Miss K. Lloyd of the Welsh Girls' School, Ashford, being named *proxime accessit*.

Obituary.

WILLIAM HENRY CHARLES STAVELEY, F.R.C.S. ENG., L.R.C.P. LOND.

WE record with regret the untimely death of William Henry Charles Staveley, at 24, Sloane-gardens, Chelsea, in his forty-eighth year. He was born in London in 1863, the son of the late T. G. Staveley of the Foreign Office, was educated at Tonbridge School, and in 1881 joined the medical school of St. Thomas's Hospital. In 1886 he became M.R.C.S. Eng., L.R.C.P. Lond., and immediately obtained a series of house appointments, including that of house surgeon, a post which he filled with unusual distinction, earning the good opinion of all his seniors for ability and devotion to his work, while he obtained, what are not infrequently more elusive, the confidence of the patients and the esteem of the dressers and others who worked under him. Indeed, few St. Thomas's men won and retained so wide a circle of personal friends; none will be more widely missed or deeply regretted in this respect. His hospital career foreshadowed the success which awaited him in private practice, for he inspired in those who had the good fortune to become his patients similar confidence and regard.

Staveley took the Fellowship of the Royal College of Surgeons of England in 1890, and on leaving St. Thomas's Hospital was appointed resident clinical assistant at Bethlem Royal Hospital. He afterwards spent many months as resident medical officer at the Victoria Hospital for Children, where he did valuable work in connexion with intubation of the larynx, while with regard to the operation for adenoids, which was then in its infancy, he may be regarded as a pioneer. On leaving the Victoria Hospital he began general practice in the West End and established himself in South Eaton-place, afterwards removing to Sloane-gardens. It was not long before his sterling professional qualities and charming personality won for him a practice which was only limited by the exigencies of time and distance. To his patients he was all that a medical man can hope to be. Always hopeful and kindly, and gay on occasions, he was full of practical sympathy, generally knowing by intuition the best course to take, and always taking it steadily, clearly, and simply. Staveley had no pretensions, he never posed; but he knew his work, and how well he did it is shown by the trust which he inspired, by the general grief evoked by his early death, and by the fact that his brother practitioners believed in him implicitly and never envied him his success. He was an ideal general practitioner, and there can scarcely be higher praise for any member of modern society when we remember what is really signified by the phrase.

Staveley's health began to fail him of late years, tuberculous affection of the lungs compelling him on occasions to give up practice entirely, while it was difficult for him to work at the high pressure to which he had been accustomed. He went bravely on, cheery and undaunted by the illness which came upon him; a fine example of courage, ever ready with help and sympathy for those who wanted him, though his need was often greater than theirs. Like most men in busy general practice, he had little time for literary work, but he published several interesting papers in our columns and elsewhere, and in his early days edited, or rather re-wrote, "Gardner's Household Medicine." Away from his work he was a lover of country life and sport of many kinds, was a splendid swimmer, and an enthusiastic fisherman on sea and river. He attained European celebrity as a fencer, and in the most important competitions with foil or épée was always selected as a judge. He himself fought for England in more than one international competition. At the International Tournament at the Crystal Palace in 1904 he was chosen by all the foreign competitors to preside over the jury in the final pool for the International Épée Championship. He was entrusted in 1908 with the organisation of the foils display in connexion with the Olympic Games in London and the selection of the foil fencers who represented this country on that occasion. These important duties he discharged with complete success, his judgment and his absolute fairness remaining unquestioned.

We offer our sympathies to Mr. Staveley's family and many friends upon his untimely death, which followed upon an illness of terrible suddenness, acute septicæmic symptoms supervening on a small carbuncle. Doubtless his long-standing weakness had sapped his powers of resistance.

DR. H. HUCHARD.

FRENCH medical science has sustained a serious loss by the death of Dr. H. Huchard, who passed away on Dec. 11th at his residence at Clamart. He was born in 1844 at Auxon in the Aube. After being admitted *interne des hôpitaux* in the usual course, he graduated as doctor of medicine in 1875, became hospital physician in 1878, and in 1883 published jointly with Axenfeld a "Treatise on Nervous Diseases." He had, however, already devoted himself to the study of diseases of the heart and blood-vessels, and in 1884 he published a work on "Angina Pectoris," for which he was awarded the Prix Godard. He was from this time forth busily engaged at the Hôpital Necker, where he had a large following of students, but he nevertheless published numerous memoirs on various diseases of the heart and blood-vessels and on associated conditions. Most of these productions were incorporated in his "Clinical Treatise on Diseases of the Heart and Blood-vessels," which appeared in 1893, and for which he was awarded successively the Prix Montyon and the Prix Chateauvillard. In 1900 and 1906 he published two other volumes on clinical therapeutics, entitled "Medical Consultations," his other published works including "Treatment of Diseases of the Circulatory Apparatus," "Clinical Therapeutics," "New Medical Consultations," "Treatment of Diseases of the Heart," "Clinical Treatment" (written in conjunction with Dr. Fiessinger), and "Therapeutic Applications of Twenty Medicines." When arrangements were being made for the visit of the French medical men to London in 1904 he was one of its most zealous promoters. The high esteem in which he held his English professional brethren was well known, and he was fond of making jocular references to the *entente cardiaque et cordiale*. Dr. Huchard was a member of the French Academy of Medicine, an officer of the Legion of Honour, and one of the best-known French specialists on diseases of the heart. He founded and conducted the *Journal des Praticiens*, a widely read and highly appreciated periodical dealing with practical medicine. The announcement of his death evoked many expressions of sympathy and regret; he was very popular with his pupils and also with the general body of students, who had in him on all occasions a zealous defender of their rights.

Our Paris correspondent writes: "Before Huchard's discoveries the attention of medical men had been directed almost entirely to lesions of the cardiac orifices—lesions which were no more than residual conditions almost always inaccessible to treatment. To him belongs the merit of showing that many cases of heart disease are due to a functional disorder of the circulation which he called arterial hypertension and to arterio-sclerosis, of which this hypertension is only the first stage. Huchard fully recognised the importance of the conditions on which arterial hypertension depended, and showed that it might be reduced by the removal of these conditions, which are frequently amenable to treatment by hygienic measures and dieting. As he did not occupy any official chair in the Faculty of Medicine, it is the more to his credit that he was able to attract to his lecture room in the Hôpital Necker crowded audiences such as are not always to be seen in the great amphitheatre of the school. He was a master of the art of throwing light on the most difficult problems. In 1908, when he had reached the age limit for hospital physicians, he founded the clinic for diseases of the heart, where a great many medical men of all countries came for instruction, the clinical material being very large; since last June, however, he was unable to attend personally on account of ill-health. He was for 15 years the foremost consultant physician in France."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Adolf Freiherr von La Valette St. George, formerly professor of anatomy in the University of Bonn, at the age of 79. He was a man of great general and scientific attainments, and with Waldeyer and O. Hertwig edited the *Archiv für Microskopische Anatomie*.—Dr. Frank Newell Lewis, professor of ophthalmology in the New York Post-Graduate School of Medicine.—Dr. Nathaniel Pendleton Dandridge, formerly professor of surgery in the Miami Medical College, Cincinnati.—Dr. F. Suter, a Swiss surgeon who had only a short time ago commenced his duties as professor of surgery in the University of Lima, Peru, suddenly; his age was 37.—Dr. Hieronymus Laub, who was for many years the Director-General of the Danish Army Medical Service, aged 72.—Dr. M. von Cube, who belonged to Livonia, and practised for many years in St. Petersburg, but for a long time past has been one of the best known physicians in Mentone. His age was 79.—Dr. H. Huchard, the eminent Paris physician.—Dr. Labrousse, a French senator.

Medical News.

UNIVERSITY OF OXFORD.—In the recent examination for the degree of Bachelor of Medicine the following candidates were approved:—

FIRST B.M. EXAMINATION.

Organic Chemistry.—W. G. V. Blogg, K. G. Bowes, L. R. Broster, L. G. Brown, W. H. Butcher, J. B. Cavenagh, R. W. J. A. Cushing, J. F. Haynes, R. J. Inman, O. G. Parry-Jones, P. P. Reitlinger, S. W. F. Underhill, H. St. H. Vertue, and D. M. P. Whitcombe.
Human Anatomy and Physiology.—A. C. Ballance, C. H. Carlton, J. C. Davies, A. W. Dennis, C. H. L. Harper, A. L. Pearce-Gould, T. O. Thompson, and T. A. Townsend.

SECOND M.B. EXAMINATION.

Materia Medica and Pharmacology.—H. T. Evans, R. A. Fawcus, D. P. McDonald, W. R. Reynell, and R. C. Wingfield.
Pathology.—H. C. Bazett, W. H. Bleaden, N. G. Chavasse, P. L. Gibson, E. G. Martin, G. E. Neligan, and W. J. Pearson.
Forensic Medicine and Public Health.—A. R. Chavasse, W. A. Cooke, G. E. Downs, H. J. B. Fry, A. D. Gardner, P. L. Gibson, G. W. Johnson, G. E. Neligan, E. O'Connor, E. L. Pearce-Gould, J. F. Penson, and R. C. Wingfield.
Medicine, Surgery, and Midwifery.—R. F. B. Bowes, A. W. Donaldson, G. E. Downs, G. W. Johnson, E. P. Poulton, A. S. Roe, and R. C. Wingfield.

VICTORIA UNIVERSITY OF MANCHESTER.—At examinations held recently the following candidates were successful:—

THIRD M.B. EXAMINATION.

General Pathology and Morbid Anatomy.—F. S. Beadle, *R. B. Berry, *A. G. Bryce, G. C. Dixon, Geoffrey Fildes, W. H. Kauntze, J. A. Lees, *P. H. Midgley, *T. H. Oliver, *S. B. Radley, L. W. Sparrow, C. F. White, *A. G. Wilkinson, and H. D. Willis.
* Distinction in Pathology.

SECOND M.B. AND CH.B.

Alan Barrett, F. A. Bearn, J. G. Bennett, E. S. Brentnall, F. S. Charnock, H. F. Hutchinson, Harold Kempsey, Eugene Leahy, W. L. Nicholson, T. P. Robertson, H. A. Sandiford, Cornelius Thompson, F. K. Tomlinson, C. H. Whittall, H. W. F. Williams, and G. W. Wood.
Anatomy.—L. B. Baird, F. L. Newton, and Ernest Talbot.
Physiology.—Harman Taylor.

THIRD B.D.S. EXAMINATION.

T. A. B. Corless.

DIPLOMA IN DENTISTRY (THIRD EXAMINATION).

H. D. Firth, Arnold Gibson, C. S. Harding, Harry Lyth, W. J. Piper, C. H. Plummer, Thomas Rothwell, and A. B. Tough.
Anatomy and Physiology.—D. M. Lawrie.
Dental Anatomy and Histology.—S. G. Ross.

UNIVERSITY OF LIVERPOOL.—At the examination for the Diploma in Tropical Medicine held recently the following candidates were successful:—

E. Brabazon, L. Castellino, J. A. Caulcrick, W. E. Haigh, H. F. Hamilton, W. St. M. Hefferman, A. Hipwell, J. Homer, W. M. Houston, D. P. Johnstone, A. G. Macdonald, C. C. Murison, P. D. Oakley, I. C. Pratt, E. L. Sieger, P. J. de Sousa, and J. H. Waterhouse.

FOREIGN UNIVERSITY INTELLIGENCE.—*Algiers:* Dr. Poujol, Professor *agrégé* in Montpellier, has been appointed Professor of Pathological Anatomy and Histology in succession to Dr. Weber.—*Atlanta (College of Physicians and Surgeons):* Dr. Justin F. Grant has been appointed Professor of Embryology and Histology; and Dr. W. W. Funk, of Philadelphia, Adjunct Professor of Bacteriology.—*Buffalo:* Dr. E. A. Bowerman has been appointed Lecturer on Hygiene.—*Catania:* Dr. Giovanni Alonzo has been recognised as *privat-docent* of Pathological Histology.—*Genoa:* Dr. Giovanni Romanelli has been recognised as *privat-docent* of Internal Pathology and Dr. Mari Vittorio Maragliano as *privat-docent* of Physical Therapeutics.—*Halle:* Dr. Theodor Heynemann has been recognised as *privat-docent* of Midwifery and Gynæcology.—*Harvard:* Dr. Harvey Cushing, of Johns Hopkins University, has been appointed to the chair of Surgery.—*Marburg:* Dr. W. Zangemeister, of Königsberg, has been appointed to the Chair of Midwifery and Gynæcology

in succession to Dr. Stöckel.—*Naples:* Dr. Giuseppe Giordano has been recognised as *privat-docent* of Topographical Anatomy and Operations: and Dr. Raffaele D'Alise as *privat-docent* of Odontology.—*Parma:* Dr. Luigi Carozzi has been recognised as *privat-docent* of Trade Diseases.—*Philadelphia (University of Pennsylvania):* Dr. Richard M. Pearce, Professor in the University and Bellevue Hospital Medical College of New York, has been appointed Professor of Pathological Anatomy and Experimental Medicine. Dr. A. E. Taylor, Professor in San Francisco, has been appointed Professor of Physiological Chemistry.—*Toulouse:* Dr. Ribaut, Professor *agrégé*, has been promoted to the chair of Pharmacy.—*Yale:* Dr. Yandell Henderson has been appointed Professor of Physiology.—*Zürich:* Dr. F. Sauerbruch, of Marburg, has been appointed to the Chair of Clinical Surgery in succession to Dr. Krönlein.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. Joseph H. Houldsworth of Glasgow, the London Homœopathic Hospital will receive £5000, while the Glasgow Royal Infirmary, the Western Infirmary, Glasgow, the Victoria Infirmary, Glasgow, the Royal Glasgow Asylum for the Blind, the Broomhill Home for Incurables, the Royal Hospital for Sick Children, Glasgow, and the Ayr County Hospital will each receive £1000.—The late Mrs. E. A. Freeman has, among other charitable bequests, left £1000 to the Halifax Infirmary, £1000 to the Royal Albert Idiot Asylum, Lancaster; and £500 to the Royal Bath Hospital, Harrogate.—By the will of Mr. Frederick Bloomenthal, some £30,000 have been left for charitable purposes, and the following institutions will receive about one-sixteenth of that sum: London Hospital, Guy's Hospital, St. Bartholomew's Hospital, St. Thomas's Hospital, St. George's Hospital, Westminster Hospital, Charing Cross Hospital, Royal Free Hospital, Gray's Inn-road, the Cancer Hospital, and Brompton Hospital for Consumption.—Sir Henry Harben has sent to St. Mary's Hospital, Paddington, a further donation of £1000 in memory of the late Mr. H. A. Harben; and to St. Bartholomew's Hospital £500 for the general funds of the hospital, and £500 for the Nurses' Home Rebuilding Fund.—The late Mr. H. Silver, the *Punch* artist, among other bequests, made the following: £50,000 to the Royal Free Hospital, Gray's Inn-road; £25,000 to the Royal Victoria Hospital for Children, Chelsea; £25,000 to the Hospital for Children, Great Ormond-street; and £2000 to the West London Workshops for the Blind.—Under the will of the late Miss Isabella L. Boustred the Seamen's Hospital Society, Greenwich, will receive £1000, the Royal Hospital for Incurables and the Hospital for Sick Children, Great Ormond-street, £200 each.

METROPOLITAN HOSPITAL SUNDAY FUND.—The annual meeting of the constituents of the Metropolitan Hospital Sunday Fund was held at the Mansion House under the presidency of the Lord Mayor on Dec. 16th. Sir John Bell, in moving the adoption of the report (already summarised in THE LANCET, Dec. 10th, p. 1725), said although the total of the Fund was less than last year, that was mostly accounted for by the fact that no legacies had been received. The Rev. P. Clementi-Smith seconded the resolution. The Rev. D. S. Lewis asked for information with regard to the grant to St. George's Hospital. Sir William Church, chairman of the Distribution Committee, said that the award was made upon exactly the same terms and bases as those to all the other hospitals in accordance with the sum expended on maintenance of its patients. The smaller grant to the hospital last year was due to an exceptionally large number of legacies, which placed its accounts on the right side of the ledger. The Rev. D. S. Lewis then moved as an amendment that the report be adopted, with the exception of the grant of £1545 to St. George's Hospital, which should be referred back to the Distribution Committee for further consideration, and that the committee should report to the general meeting called for the purpose, after King Edward's Hospital Fund had publicly declared itself satisfied with the financial relations between the hospital and the medical school. After some discussion the amendment was lost by 18 votes to 38 and the report carried by an overwhelming majority. The council for the year was re-elected, with the addition of the Rev. W. S. Swayne, and Sunday, June 18th, was fixed for Hospital Sunday next year. The proposal to increase the percentage of the Fund allocated to the purchase of surgical appliances from 5 to 7½ per cent. was adopted unanimously, and a vote of thanks to the Lord Mayor terminated the proceedings.

SOME FAILURES WITH "606" IN RUSSIA.—At a meeting of the Public Health Society, St. Petersburg, Dr. P. P. Yakoblieff gave a report on the Ehrlich preparation "606" and its application to children at the breast and to nursing mothers. He described six cases involving six children, of whom three were injected directly, and the nursing mothers of the other three were similarly treated. In neither series was the rapid betterment noted that has been ascribed to the remedy elsewhere. In the cases of the direct injections, ulcers were formed and the remedy was slowly absorbed. Only two of them appeared to improve, and that very slowly. In the third case no difference at all was observed. In the cases of the nursing mothers the eruptions subsided and began to heal, but did not disappear. In the discussion following on the reading of the report Professor V. O. Hubert said that the disappointing results might be due to special conditions, such as insufficient doses of the remedy. But even he had to report a case of a young man, aged 18 years, who, duly inoculated, relapsed after a short time. Other speakers confirmed the ineffective result of arsenobenzol in cases of infants at the breast.

THE LEAGUE OF MERCY.—On Dec. 19th, at the Middlesex Hospital, Lord Farquhar presided over the eleventh annual meeting of presidents of the league. In opening the proceedings the chairman read a letter from the King's secretary, in which His Majesty expressed his unabated interest in the work of the League of Mercy. On the motion of Mr. Carl Hentschel, seconded by Mr. B. S. Straus, Lord Farquhar was appointed chairman of the next annual meeting, Mr. Frederick Green vice-chairman, and Colonel H. B. Hamilton honorary secretary. In his financial statement Sir Henry Burdett, honorary treasurer, said that the year had been a bad one for the purposes of the league. The total result of the collections had been £20,000, as compared with £21,606 last year. The total amount contributed by the league to the London hospitals through the King's Fund in the last 11 years was £153,000. The total the league had given to the country hospitals was £7660, making a grand total of £160,000. The districts presided over by members of the Royal Family had produced a total of £27,238. The Duchess of Somerset suggested the formation of sub-committees for the purpose of organising bodies of workers on behalf of the league, and asked for an assurance that the money collected by the League was spent solely in the interests of the sick poor. Sir William Collins said, on the authority of those responsible for the management of the King's Fund, that no money handed over by the League to the Fund was diverted to medical schools.

BOOKS, ETC., RECEIVED.

AMERICAN MEDICAL PUBLISHING CO., 84, William-street, New York City.

Pneumonia. A Symposium on the Occurrence, Etiology, Diagnosis, Prognosis, and Treatment of Pneumonia. Reprinted from *American Medicine*, April, 1910. Arranged and edited by H. Edwin Lewis, M.D. Price not stated.

CHURCHILL, J. AND A., London. THE LIVERPOOL BOOKSELLERS' CO., LIMITED, 70, Lord-street, Liverpool.

The Dawn of the Health Age. By Benjamin Moore, M.A., D.Sc., M.R.C.S., L.R.C.P. Price 3s. 6d. net.

ENGELMANN, WILHELM, Leipzig.

Gehirn und Rückenmark. Leitfaden für das Studium der Morphologie und des Faserverlaufs. Von Dr. med. Emil Villiger. Zweite Auflage. Price M.12.80.

FISCHER, GUSTAV, Jena.

Sammlung Anatomischer und Physiologischer Vorträge und Aufsätze. Herausgegeben von Prof. Dr. E. Gaupp und Prof. Dr. W. Nagel. Heft 12. Die Elemente des Herzmuskels. Von Prof. Dr. A. Dietrich, Charlottenburg. Price M.1.20.

Vergiftungen durch Pflanzen und Pflanzenstoffe. Ein Grundriss der vegetalen Toxikologie für praktische Aerzte, Apotheker und Botaniker. Von Freiderich Kanngiesser, Dr. med. et phil. Price M.1.

Lehrbuch der Chirurgie. Herausgegeben von Prof. Wullstein und Prof. Wilms. Zweite umgearbeitete Auflage. Erster Band: Allgemeiner Teil. Chirurgie des Kopfes, des Halses, der Brust und der Wirbelsäule. Price, paper, M.10; bound, M.11.

Die Krankheiten der Warmen Länder. Ein Handbuch für Aerzte. Von Dr. B. Scheube, Geh. Medizinal-Rat in Greiz. Vierte umgearbeitete und erweiterte Auflage. Price, paper, M.22.50; bound, M.25.

GEORG ET CIE, 10, Corraterie, Geneve; et à Bâle. ALCAN, FELIX, Paris.

Leçons de Chirurgie de Guerre; des Blessures faites par les Balles des Fusils. Par J. L. Reverdin, Professeur à la Faculté de Médecine de Genève. Préface de H. Nimier, Médecin-inspecteur. Price Fr.7.50.

GREEN, WILLIAM, AND SONS, Edinburgh.

The Cancer Problem. A Statistical Study. By C. E. Green, F.R.S.E. Price not stated.

HIRSCHWALD, AUGUST, Berlin.

Sammlung Klinischer Abhandlungen über Pathologie und Therapie der Stoffwechsel- und Ernährungsstörungen. Herausgegeben von Prof. Dr. Carl von Noorden. 9 und 10 Heft. Die Vagotonie. Eine klinische Studie. Von Privatdozent Dr. Hans Eppinger und Dr. Leo Hess (Wien). Price M.2.80.

KARGER, S., Berlin.

Die Wassermannsche Reaktion mit besonderer Berücksichtigung ihrer klinischen Verwertbarkeit. Von Priv.-Doz. Dr. Harald Boas, I. Assistenten am Rudolf Berghs-Hospital für venerische Krankheiten in Kopenhagen. Mit einem Vorwort von Geh. Rat Prof. Dr. A. Wassermann. Price, paper, M.5.60; bound, M.6.80.

Diagnostik der Nervenkrankheiten. Von Dr. L. E. Bregman. Mit einen Geleitwort von Hofrat Prof. Dr. H. Obersteiner in Wien. Price, paper, M.12; bound, M.13.60.

Theorie und Praxis der Inneren Medizin. Ein Lehrbuch für Studierende und Aerzte. Von Dr. Erich Kindborg in Bonn. Erster Band. Die Krankheiten der Zirkulations- und Respirationsorgane. Price, bound, M.7.

LEHMANN'S VERLAG, J. F., München.

Beiträge zur Praktischen Chirurgie. Bericht über die Jahre 1907, 1908, 1909, aus der Chirurgischen Privatklinik von Dr. Krecke in München. Price M.7.

Die Krankenkost. Ein praktisches Handbuch für Aerzte. Kranken- und Wohlfahrtsanstalten, Sanatorien, Pflegepersonen, Erziehungsanstalten und für die Familie. Von Emilie Kieslinger, Wien, und Dr. Karl Wirth, Wien. Price, paper, M.3.60; bound, M.4.60.

Vorlesungen über Magen- und Darmkrankheiten. Von Hofrat Dr. Friedrich Crämer. 5 Heft. Das runde Magengeschwür. (Ulcus ventriculi rotundum). Von Hofrat Dr. Friedrich Crämer. Price M.4.50.

MARHOLD, CARL, Halle a.S.

Besteht ein ätiologischer Zusammenhang zwischen parenchymatöser Keratitis und Verletzung? Von A. Vossius in Giessen. Price M.1.

Klinik für psychische und nervöse Krankheiten. Herausgegeben von Robert Sommer, Dr. med. et phil. V. Band. 3 Heft. Price M.3.

MASSON ET CIE, Paris.

Précis de Parasitologie. Par E. Brumpt. Préface par M. le Professeur R. Blanchard. Price Fr.12.

MURRAY, JOHN, London.

Induced Cell-Reproduction and Cancer. The Isolation of the Chemical Causes of Normal and of Augmented, Asymmetrical Human Cell-Division. By Hugh Campbell Ross, M.R.C.S. Eng., L.R.C.P. Lond., Surgeon, Royal Navy (Emergency List); Director of Special Researches at the Royal Southern Hospital, Liverpool; and Honorary Clinical Pathologist to the Royal Liverpool Country Hospital for Children. Being the Results of Researches carried out by the Author, with the Assistance of John Westray Croppei, M.B., M.Sc. Liv., M.R.C.S. Eng., L.R.C.P. Lond., Assistant to the Research Department of the Royal Southern Hospital, Liverpool. With Illustrations. Price 12s. net, cash.

STEINHEIL, G., Paris.

Recherches expérimentales sur les Tumeurs Malignes. Par le Docteur Jean Clunet. (Travail du Laboratoire d'Anatomie Pathologique de la Faculté de Médecine de Paris.) Price Fr.8.

Le Tronc Cœliaque. Par Pierre Descomps, Prosecteur des Hôpitaux. (Travail de l'Amphithéatre d'Anatomie des Hôpitaux. Recherches d'Anatomie Chirurgicale sur les Artères de l'Abdomen.) Price Fr.10.

THE ERNST HOMŒOPATHIC CONSULTING-ROOMS AND DISPENSARY, 15, Pall Mall East, London, S.W.

Oxyuris Vermicularis (The Threadworm). A Treatise on the Parasite and the Disease in Children and Adults, together with Particulars of a Rapid, Harmless, and Reliable Cure. By Maurice Ernst, LL.D. Vienna, Consulting Homœopath. Price 1s.

THE WALTER SCOTT PUBLISHING CO., LIMITED, London and Felling-on-Tyne.

The Contemporary Science Series. Edited by Havelock Ellis. The Jews: A Study of Race and Environment. By Maurice Fishberg, Fellow of the New York Academy of Sciences, Member of the American Ethnological Society, &c. Price 6s.

THIEME, GEORG, Leipzig.

Die Zeugung beim Menschen. Eine sexualphysiologische Studie aus der Praxis. Von Dr. med. Hermann Rohleder, Spezialarzt für Sexualleiden in Leipzig. Mit Anhang: Die künstliche Zeugung (Befruchtung) beim Menschen. Price M.7.

URBAN UND SCHWARZENBERG, Berlin und Wien.

Lehrbuch der Augenheilkunde in der Form klinischer Besprechungen. Von Dr. Paul Römer. Price, paper, M.20; bound, M.22.

Interne Klinik der Bösartigen Neubildungen der Bauchorgane. Von Priv.-Doz. Dr. Rudolf Schmidt. Price, paper, M.12; bound, M.14.

VERLAG "ERIKA," Magdeburg. (Kommissionär: O. WEBER, Leipzig.)

Lehrbuch der Trichinen und Finnenschau. Von Carl Schroeder, Direktor des städtischen Schlachthofes zu Salzwedel. Price, paper, M.1.40; bound, M.1.80.

VINTON AND CO., LIMITED, 8, Bream's-buildings, Chancery-lane, London, E.C.

Live Stock Journal Almanac for 1911. Price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BREWIS, ROBERT ADAMS, M.D., C.M. Edin., has been appointed Medical Officer of Health by the Dursley (Gloucestershire) Rural Council.

CAMPBELL, R. H., M.B., B.S. Glasg., has been appointed Clinical Assistant to the Samaritan Free Hospital.

DUNN, J. C., has been appointed Clinical Assistant to the Samaritan Free Hospital.

HEATON, GEORGE, M.B. Oxon., F.R.C.S. Eng., has been appointed Examiner in Surgery to the University of Oxford.

JOLL, CECIL A., M.B., B.S. Lond., F.R.C.S. Eng., L.R.C.P. Lond., L.D.S. Eng., has been appointed Senior House Surgeon to the Leicester Infirmary.

LEY, BERNARD, M.R.C.S., L.R.C.P. Lond., has been appointed Clinical Assistant to the Samaritan Free Hospital.

LYLE, H. WILLOUGHBY, M.D., B.S. Lond., F.R.C.S. Eng., has been appointed Assistant Ophthalmic Surgeon to King's College Hospital.

MEACHEN, G. NORMAN, M.D., B.S. Lond., M.R.C.P. Lond. & Edin., has been appointed Honorary Physician for Diseases of the Skin to the Foundling Hospital, London.

MOISER, LIONEL HENRY, M.B. Lond., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Central District by the Crediton (Devon) Board of Guardians.

SHANNON, DAVID, M.B., B.S. Glasg., has been appointed Visiting Surgeon to the Royal Samaritan Hospital for Women, Glasgow.

STEPHEN, LESLIE DECHMONT, M.B., C.M. Edin., has been appointed Deputy Medical Officer for the Nunney District by the Frome (Somerset) Board of Guardians.

TODD, DAVID BANSALL, M.B., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer by the Kingsbridge (Devon) Board of Guardians.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRISTOL DISPENSARY.—Medical Officer.

BRISTOL ROYAL INFIRMARY.—Dental House Surgeon. Salary £100 per annum, with apartments, board, and laundry.

CAIRO, EGYPT.—Medical Tutor at School of Medicine and Registrar to Kasr-El-Ainy Hospital. Salary £E.600 a year.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—House Surgeon for six months. Also Second House Surgeon.

CANCER HOSPITAL, Fulham-road, London, S.W.—Surgical Registrar. Salary 50 guineas per annum. Also House Surgeon for six months. Salary £70 per annum.

CHELTENHAM GENERAL HOSPITAL.—Resident Surgeon. Salary £180 per annum, with rooms, coal, and gas.

DERBYSHIRE ROYAL INFIRMARY.—House Physician and Second House Surgeon for 12 months. Salary in each case £100 per annum, with apartments, board, &c. Also Assistant House Surgeon for six months. Salary at rate of £60 per annum, with apartments, board, &c.

DUBLIN JOINT HOSPITAL BOARD CONSUMPTIVE SANATORIUM, Crooksling, Brittas, Co. Dublin.—Resident Medical Superintendent. Salary £200 per anuum, with board and residence.

EARLSWOOD ASYLUM, Redhill.—Junior Assistant Medical Officer, unmarried. Salary £130, with board, lodging, and washing.

ESKDALEMUIR PARISH COUNCIL.—Medical Officer. Salary £80 per annum.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, London, S.E.—Clinical Assistants for three months. Also House Surgeon. Salary at rate of £60 per annum, with board, residence, and washing.

HAMPSTEAD GENERAL HOSPITAL.—House Physician for eight months. Salary at rate of £70 per annum, with board and residence.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with residence, board, and washing.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Assistant Casualty Medical Officer (and House Physician), unmarried, for six months. Salary £30, with board, residence, &c. Also House Surgeon, unmarried, for six months. Salary £30, with board, residence, &c.

LINCOLN, LINDSEY COUNTY COUNCIL.—Assistant School Medical Inspector. Salary £300 per annum.

LIVERPOOL EYE AND EAR INFIRMARY, Myrtle-street.—Honorary Assistant Surgeon.

LUTTERWORTH UNION.—District Medical Officer and Public Vaccinator. Salary £40 per annum.

MANCHESTER NORTHERN HOSPITAL FOR WOMEN AND CHILDREN, Parkplace, Cheetham Hill-road.—Honorary Ophthalmic Surgeon. Also Anæsthetist. Salary £15 per annum.

NATIONAL HOSPITAL FOR THE RELIEF AND CURE OF THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.—Honorary Anæsthetist.

NEWCASTLE-ON-TYNE, HOSPITAL FOR SICK CHILDREN.—Honorary Assistant Physician.

NEWCASTLE-UPON-TYNE, CITY HOSPITAL FOR INFECTIOUS DISEASES.—Resident Medical Assistant. Salary £125 per annum, with board, lodging, &c.

NEWCASTLE-UPON-TYNE EDUCATION COMMITTEE.—Second Assistant Medical Officer. Salary £250 per annum.

PADDINGTON AND KENSINGTON DISPENSARY FOR THE PREVENTION OF CONSUMPTION.—Assistant Medical Officer. Salary £100 per annum.

PLYMOUTH, SOUTH DEVON AND EAST CORNWALL HOSPITAL.—Surgeon.

POPLAR HOSPITAL FOR ACCIDENTS, Poplar, E.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board and residence.

READING, BERKSHIRE EDUCATION COMMITTEE.—Assistant Medical Inspector of Schools. Salary £300 per annum.

ROTHERHAM HOSPITAL.—Senior House Surgeon. Salary £110 per annum, with board, lodging, and washing.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-street, Cavendish-square.—Honorary Dental Surgeon. Also Honorary Anæsthetist.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, lodging, and washing.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £82 per annum, with board, residence, and laundry.

SUNDERLAND INFIRMARY.—House Physician. Salary £80 per annum, with board, residence, and washing.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE, Hammersmith-road, London, W.—Clinical Assistants. Also Three non-resident Assistant House Surgeons.

Births, Marriages, and Deaths.

BIRTHS.

DAVIDSON.—On Dec. 18th, at Baron's Court-road, W., the wife of G. G. Davidson, M.D., of a daughter.

SIKES.—On Dec. 12th, at Moat House, Langley, Bucks, Mary Maitland (*née* Somerville), wife of Alfred W. Sikes, M.D., D.Sc. Lond., of a son.

MARRIAGES.

ELLIOT—LOVEDAY.—On Dec. 17th, at St. Mary's Church, Bryanston-square, by the Rev. C. V. Childe, M.A., LL.D., and the Rev. L. J. Percival, M.A., Andrew Elliot, M.D., M.R.C.P., of 110, Gloucester-place, Portman-square, W., to Mary Louisa, younger daughter of William Loveday, Esq., of The Poplars, Irthlingborough, Northamptonshire.

FENWICK—STOCKDALE.—On Dec. 17th, at St. Martin's-in-the-Fields, Trafalgar-square, by the Rev. H. Rose, M.A., William Stephen Fenwick, M.S., F.R.C.S., 81, Harley-street, W., only son of Thos. Fenwick, of Southampton, to Enid Stockdale, third daughter of Thos. Stockdale, Spring Lea, Leeds.

HAWKINS—RYND.—On Dec. 17th, at St. Mary's, Kells, Co. Kilkenny, Herbert Pennell Hawkins, M.D., F.R.C.P., to Hester Vera Rynd, niece of Colonel W. H. Izod, D.L., J.P., of Chapel Izod House, Co. Kilkenny.

OUSTON—TAYLOR.—On Dec. 16th, at St. Andrew's Church, Bath, by the Rev. Prebendary Stone, Thomas George Ouston, F.R.C.S., of Newcastle-upon-Tyne, to Mary Taylor, second daughter of Edward Taylor, of Ayrton, Yorkshire.

DEATHS.

BRUSHFIELD.—On Nov. 28th, after a short illness, at his residence, The Cliff, Budleigh, Salterton, T. N. Brushfield, M.D., F.S.A., formerly Superintendent at Chester and Brookwood Asylums, aged 81.

POLLOCK.—On Dec. 18th, at 37, Collingham-place, S.W., James Edward Pollock, M.D., F.R.C.P., in his 93rd year. Funeral at Highgate Parish Church, Thursday, Dec. 22nd, at 2 o'clock, and burial in Highgate Cemetery.

STAVELEY.—On Thursday, Dec. 15th, at 24, Sloane-gardens, in his 48th year, William Henry Charles Staveley, F.R.C.S., son of the late T. G. Staveley, Esq., of the Foreign Office.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

RESCUE WORK IN MINES.

Mr. R. A. S. Redmayne, M.Sc., Chief Inspector of Coal and Metalliferous Mines, in his report to the Home Office for 1909, just issued as a Parliamentary paper, refers to the recommendation of the Royal Commission on Mines that in each district there should be appointed committees of colliery owners to provide for the erection of stations and training of men, and that a handbook might be drawn up containing instructions in rescue work. He records with satisfaction that there has been an increased and welcome desire evinced on the part of coal-owners to meet the needs of colliery districts in the establishment and organisation of stations for the training of rescue brigades, in the use of breathing appliances, and in general mine rescue work. The improvement is, however, much more marked in some districts than in others. Mr. Redmayne selects for special commendation the system in operation at Howe Bridge Rescue Station in Lancashire, which is enjoying the support of a large majority of the Lancashire and Cheshire coal owners. The station in question is now in complete working order. Since the training was started on Oct. 26th, 1908, no fewer than 269 men, drawn from 30 different firms, have been trained, and of these 136 have passed their re-examination, which is held 12 months after the teams have qualified in the use of the apparatus and obtained their certificates, and about 50 men are at present undergoing the course of training. The type of apparatus used is the (Siebe Gorman) "Fleuss," slightly modified in respect of certain details. A code of recommendations and rules has been drawn up with a view to ensuring proper discipline, and so limiting the rescuers to only unavoidable risks. Amongst these recommendations and rules are the following:—

The men chosen for rescue work should be intelligent, healthy, from 25 to 50 years of age, should be ambulance trained and kept efficient in ambulance work. They should not be of a nervous temperament, and the teams should be chosen from the different shifts of surface as well as underground workmen, and all should reside as near the colliery as possible. Before admission for training all men must be medically examined, and the examination should be repeated each year. With the view of maintaining the efficiency of the teams, periodical practices with the apparatus, both at the colliery and the station, are recommended. The following apparatus and stores should be provided and maintained at every colliery in constant readiness for use:—

1. Seven, but not less than five, complete sets of apparatus with oxygen cylinders ready charged. Each man should have his own mouthpiece, to be kept on a peg, with his name written over it.
2. Spare oxygen cylinders fully charged.
3. Supply of best anhydrous caustic soda in hermetically sealed bottles.
4. Spare nose clips, masks, and mouthpieces.
5. Goggles for use in smoke.
6. The necessary electric lamps, with spare accumulators.
7. An oxygen reviving apparatus.
8. A regulation sling chair or saddle for descending the shaft when the cages are jammed or not available.
9. A regular stretcher.
10. A first-aid ambulance case.
11. A few tins of compressed sulphurous acid.

It is advisable that at each colliery there should be some room prepared which could be simply and quickly rendered comparatively air-tight and converted into a testing-room, where each man could test his apparatus in a noxious atmosphere. For this purpose a few tins of compressed sulphurous acid should be kept with the other stores. It is also advisable that a convenient room or rooms should be selected at each pit, which in case of accident could quickly be prepared for the accommodation of the rescue teams, and where they could wait their turn, eat, and, if necessary, sleep. It is very desirable that an interval of three hours shall have elapsed since the last meal before a man works with the apparatus. The man appointed by the colliery to be responsible for the upkeep of the apparatus, or the sergeant-instructor of the station, shall go through the following list of cardinal rules one by one with each member of the team in turn previous to his using the apparatus:—

(*a*) Before putting on apparatus inquire if each man is in his ordinary state of health. False teeth to be removed. At least 120 atmospheres to be in the oxygen cylinder. Four pounds of hard dry pure caustic soda to be in the breathing bag. All joints to be tightly screwed up and rigid. Try the three valves (main, gauge, by-pass) and see that they work freely.

(*b*) After putting on apparatus, buckle belts and adjust the apparatus, leaving nose clip off. Test the apparatus by turning on main valve, fill breathing bag three parts full, close main valve, close the mouthpiece at the same time with the tongue, then press the bag evenly with both hands, and listen for any escape of gas. On removal

of the hands, see that the bag is in the same condition—viz., that it holds the same quantity of gas. Put nose clip on and test apparatus in room provided filled with noxious gas. An electric lamp, a pair of goggles, and a lump of chalk should be carried by each team, and a small metal flask of brandy by No. 2.

When exploring, the distance between each man should not exceed four yards, and the whole team must keep absolutely together. Unless expressly ordered by the manager, no team must advance more than 200 yards from the base, nor be absent for a longer period than 20 minutes. Any hard work should be equally shared, if possible, so as to equalise the supply of oxygen in the cylinders. As soon as any member of the team has used up one-half of his supply of oxygen the whole party must return. No man must use the apparatus more than one shift of two hours in every 24 hours. In no circumstances should the mouthpiece be removed after leaving the base. When one member of the team breaks down from any cause the whole party must return at once. Should any member of the team feel distressed he should report the same on his return to the officer in charge, and should not be asked to use the apparatus again until he has submitted himself for examination by the medical officer.

The inspector mentions that there are several types of breathing apparatus in use at rescue stations, and opinions differ as to which is the most efficient. At several centres experiments are being carried out with a view of determining the merits of the respective types, and the council of the Royal Society of Arts, with a view of encouraging research in this direction, has offered a gold medal or a prize of £20 for life-saving in mines under certain conditions.

In reference to the remark of the Royal Commissioners that a knowledge of ambulance work or "first-aid" is probably of greater value in mining than in any other occupation, Mr. Redmayne observes:—"The work already carried out by the Order of St. John of Jerusalem in England and Wales, and in Scotland by the St. Andrew's Ambulance Association, is well known, and in respect of the Durham and Yorkshire mining districts has been especially marked. In the former district the number of persons employed in and about mines and quarries holding first-aid certificates was 3517, and 5257 cases of injury were treated during the year, the number of classes held during the year being 68, which were attended by 1155 students, of whom 494 obtained certificates. Although throughout the mining districts generally greater interest now appears to be taken in ambulance work than was the case a few years ago, the subject should be far more widely taught than it is, and colliery owners and managers can do much to awaken and stimulate interest in the work at their mines by organising competitions as between collieries and providing prizes, whilst if the officials of miners' unions would urge upon their members the desirability of interesting themselves in the work there can be no doubt that it would further advance matters."

SCENT IN TOBACCO.

IN our issue of Nov. 12th, 1910, we commented upon the objectionable practice of scenting tobacco so universally adopted by the modern tobacco manufacturer. At the time of writing we were not aware of the exact formula of scents used for the purpose, but in the *Pharmaceutical Journal* of Dec. 10th the following appears as an answer to a correspondent:—"*Tobacco Flavours.* The following are recognised formulæ: (1) Cascarilla, 4; liquid extract of valerian, 4; Tonquin bean, 1; rum, 12. Macerate for three or four days. (2) Tincture of cascarilla, 48; essence of Tonquin beans, 32; tinctures of tolu, orris, and valerian, of each 16; oil of nutmegs, 4; oil of cloves, 2; oil of rhodium, 1. (3) Cascarilla, 2; valerian rhizome, 1; Tonquin bean, 2; orris rhizome, 1; alcohol (60 per cent.), 40. Macerate for seven days." No wonder, as we wrote at the time, "the fragrance of pure honest tobacco is to most smokers a mere memory"!

A LABORATORY BOY ON THE NATIVE MEDICAL STUDENT.

WE have received from a correspondent the following extract from a letter to him written by his former laboratory boy, who has gone out to a laboratory in one of our Crown Colonies in the Pacific:—

> "As we have got everything in working order things go smoothly. I have been for a month's trip around these beautiful islands, and was enchanted with everything I saw. It was so strange, so different to what I expected. I have dreamt of seeing all these strange things, and now realization comes as a great surprise. I am indeed lucky to have had the chance. I wish all the boys could have come, for at any rate it broadens one's mind.
>
> "I get to like the natives, although they appear as a set of babies. They are indeed a happy race, always jolly and very kind. The Government here are trying to make medical men of some, but I think it will be a failure, for all they think about is to drink and eat. The students—there are 20 of them—are trained at the hospital near. I have one of them to help me, Jessie by name, and he looks like a huge gorilla. He washes the tubes, slides, &c., and wants continually watching. How different they are to medical students at home, for they run anywhere for a sixpence. I was amused the other day at the medical officer parading them all and trying to find out which had had a bath. One poor wretch who said he had was not believed, so they all had to go and have one then and there."

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1911:—

Feb. 20th–25th (Cairo).—Fifth International Congress for the Blind.
March 2nd–6th (Berlin).—Thirty-second Balneological Congress.
" 23rd (Paris).—First Congress of French Medical Journalists.
April 4th–7th (London).—Fourth Annual Nursing and Midwifery Conference and Exhibition.
" 18th–20th (Paris).—Third Congress of Physiotherapy of French-speaking Physicians.
" 19th–22nd (Wiesbaden).—Twenty-eighth German Congress o Internal Medicine.
" 20th–22nd (Groningen).—Thirteenth Nature and Medical Congress.
May–October (Dresden).—International Hygiene Exhibition.
May–October (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
May–October (?) (London, Shepherd's Bush).—Coronation Exhibition.
June (Paris).—First Congress of the International Medical Association for the Prevention of War.
June 5th–8th (Kolberg, Prussia).—Fifth International Congress of Thalassotherapy.
June and July (Romford).—Town Planning and Modern House and Cottage Exhibition.
July (Birmingham).—British Medical Association.
July 24th–29th (Belfast).—Congress of the Royal Sanitary Institute.
August or September (Berlin).—Third International Laryngo-Rhinological Congress.
September (Brussels).—Exhibition of Fractures.
" (Turin).—International Congress of Pathology.
Sept. 11th–15th (Berlin).—National Congress for the Study and Prevention of Infantile Mortality (*Gouttes de Lait*).
" 11th–16th (The Hague).—Thirteenth International Congress on Alcoholism.
" 18th–23rd (Sydney).—Australasian Medical Congress.
" 18th–24th (Turin).—Fourth National Congress of Hygiene.
" 24th–30th (Rome).—International Congress on Tuberculosis.
" 25th–29th (Rome) Seventh International Congress of Dermatology and Syphilology.
October (Cologne).—International Congress of Criminal Anthropology.
Oct. 1st–4th (Liége).—Second Congress of Alimentation.
Dec. 4th–9th (Havana, Cuba).—American Public Health Association.
(Date not fixed) (Genoa).—International Exhibition of Marine Hygiene.
(Date not fixed) (Rome).—International Exhibition of Social Hygiene.
(Date uncertain) (Turin).—International Exhibition of Industry and Labour.

In 1912:—
July (?) (Cologne).—International Congress of Nurses.
September (Prague).—International Congress of Radiology and Medical Electrology.
September (Berlin).—Sixth International Congress of Obstetrics and Gynæcology.
" Visit of German Medical Men to America.
Nov. 22nd–29th (Washington, D.C.).—Fifteenth International Congress of Hygiene and Demography.

In 1913:—
(London).—Seventeenth International Congress of Medicine.
(Dresden (?)).—International Conference on Cancer.
August (Buffalo).—Fourth International Congress of School Hygiene.

In 1915:—
(London).—International Prison Congress.
(London).—Imperial Exhibition (?)

Medical Diary for the ensuing Week.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women.

THURSDAY.—2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye.

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (26th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.). Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (27th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (28th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (29th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor. 9 A.M., Major, 2 P.M.).

SATURDAY (31st).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily.

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(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 20th, 1910.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Dec. 14	29·54	S.W.	0·15	66	52	50	48	50	Cloudy
,, 15	29·11	S.W.	0·29	62	53	49	50	51	Raining
,, 16	29·14	S.W.	0·48	71	55	51	52	53	Raining
,, 17	29·37	WSW	0·04	57	50	47	45	47	Cloudy
,, 18	30·04	W.	0·04	65	46	43	42	44	Cloudy
,, 19	30·17	W.	...	58	53	42	45	45	Overcast
,, 20	30·26	S.W.	...	51	48	41	41	42	Cloudy

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